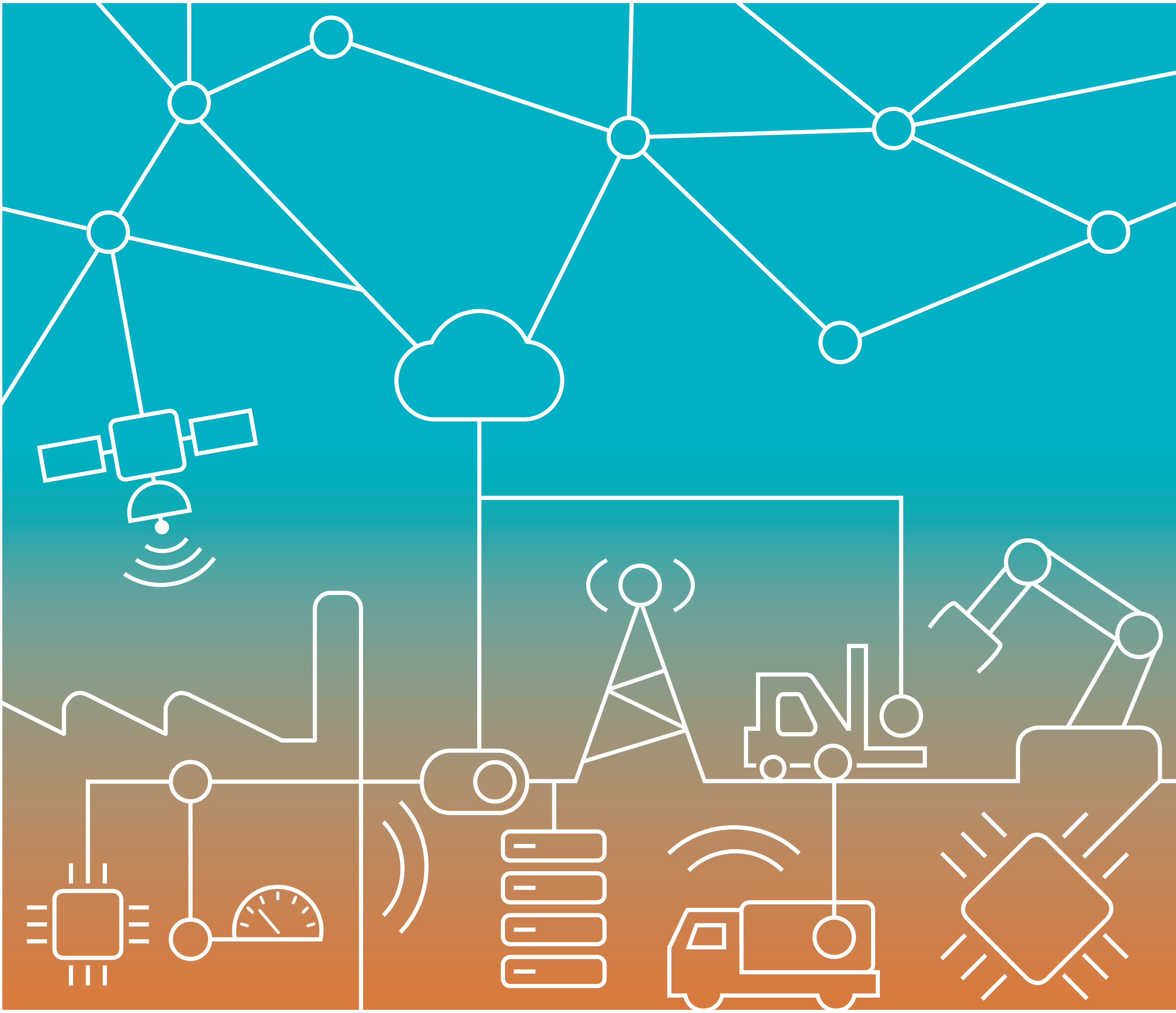


Annual Report 2018

# VISIBLE PROGRESS:
# GROWTH IN CLOUD BUSINESS.

SECURE.
INNOVATIVE.
AT YOUR SIDE.

# MULTIYEAR OVERVIEW

| € million | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| Revenues | 366.8 | 357.9 | 386.0 | 402.4 | 431.4 |
| EBITDA | 35.4 | 38.3 | 37.1 | 42.2 | 35.0 |
| Depreciation and amortisation[1] | 26.9 | 31.1 | 50.2 | 53.3 | 69.0 |
| EBIT | 8.5 | 7.1 | (13.1) | (11.1) | (34.0) |
| Net income (loss) | 3.3 | 5.1 | (25.1) | (13.2) | (33.9) |
| Earnings per share[2] (in €) | 0.03 | 0.04 | (0.20) | (0.11) | (0.27) |
| Shareholders' equity[3] | 90.2 | 89.5 | 86.3 | 113.8 | 145.6 |
| Long-term liabilities[3] | 109.3 | 147.9 | 159.3 | 171.0 | 180.2 |
| Short-term liabilities[3] | 84.1 | 59.6 | 60.4 | 63.3 | 79.7 |
| Balance sheet total[3] | 283.6 | 297.1 | 306.0 | 348.1 | 405.5 |
| Equity ratio (in %) | 31.8 | 30.1 | 28.2 | 32.7 | 35.9 |
| Free cash flow | 12.2 | 12.6 | 8.4 | 7.1 | (24.9) |
| Liquidity[3] | 53.6 | 61.9 | 67.3 | 74.0 | 88.1 |
| Capital expenditure (capex) | 17.2 | 19.3 | 28.4 | 26.7 | 30.0 |
| Capex ratio[4] (in %) | 4.7 | 5.4 | 7.4 | 6.6 | 7.0 |
| Dividend per share (in €) | 0.03[5] | 0.03 | 0.03 | 0.03 | 0.10 |
| Xetra closing price[3] (in €) | 1.27 | 1.51 | 1.92 | 1.51 | 1.74 |
| Number of shares[3] | 124,172,487 | 124,172,487 | 124,172,487 | 124,162,487 | 124,142,487 |
| Market capitalisation[3] | 157.7 | 187.5 | 238.4 | 187.5 | 216.0 |
| Number of employees[3] | 1,282 | 1,342 | 1,360 | 1,454 | 1,697 |

Consolidated financial statements (IFRS) from 2014 to 2018.

[1] Including non-cash share-based compensation.

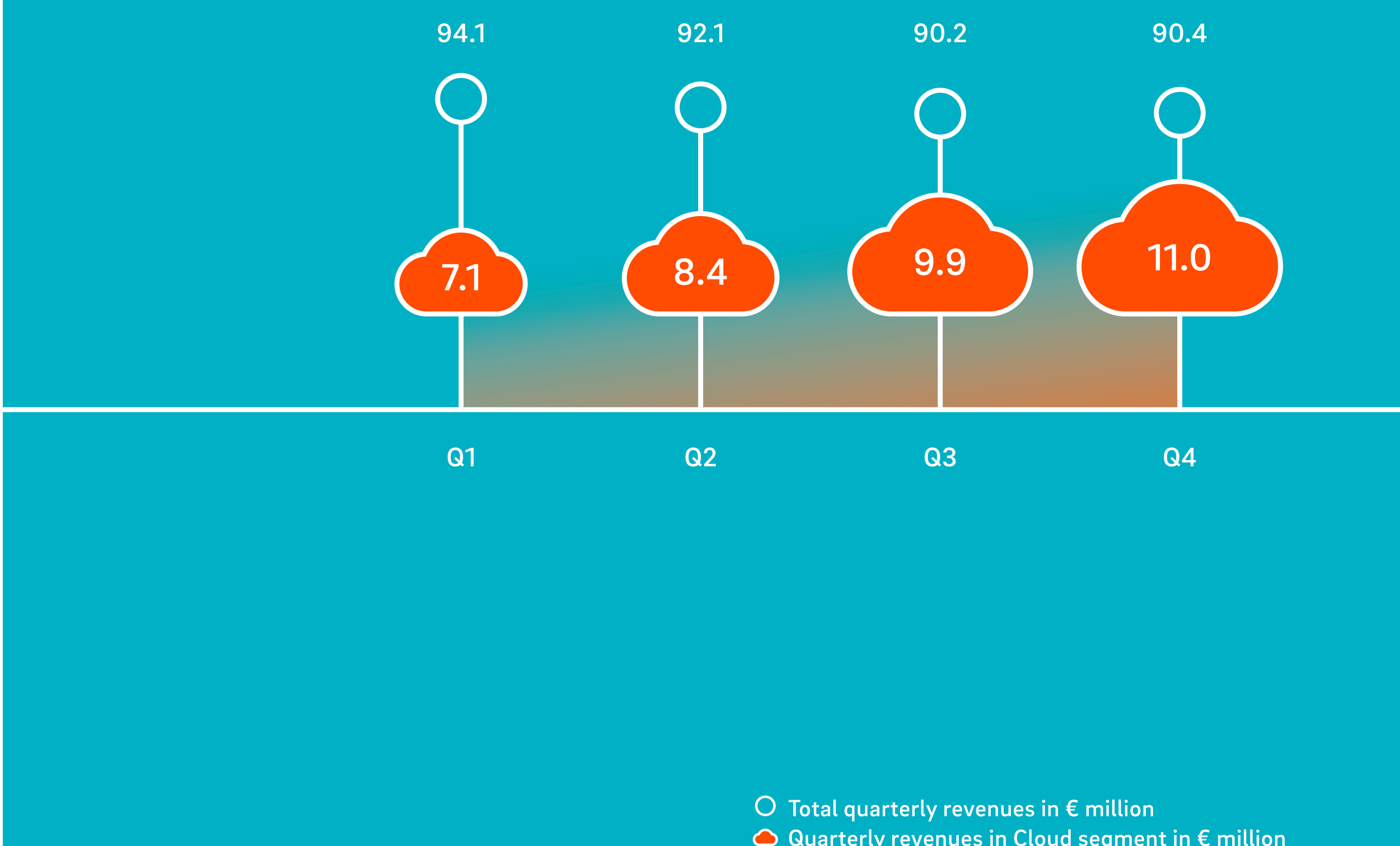
[2] Basic.

[3] As of 31 December.

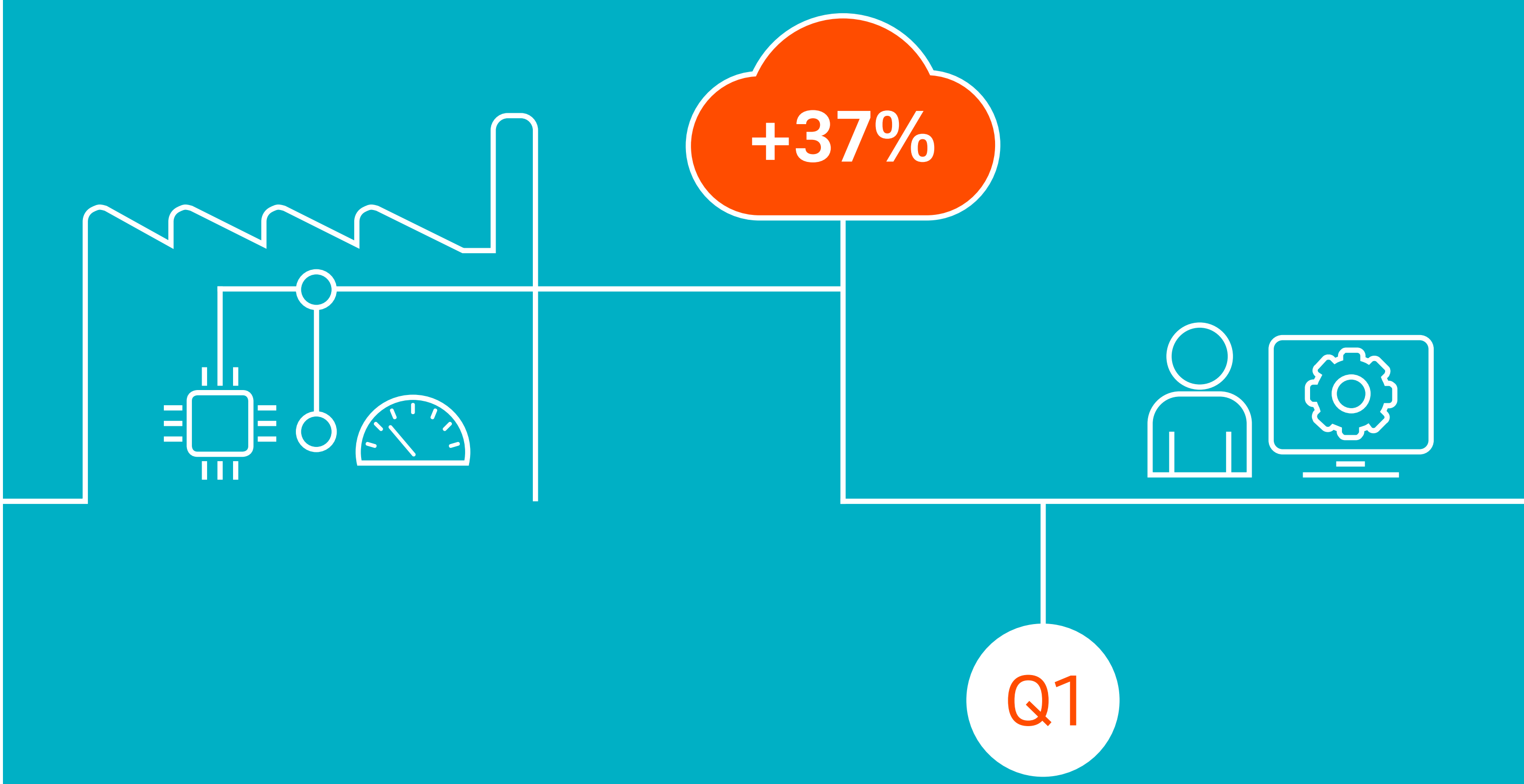
[4] Ratio of capital expenditure to revenues.

[5] Proposal to the Annual General Meeting.

QSC is digitalising the German SME sector. In accompanying its customers securely into the digital age, it draws on decades of experience and expertise. The cloud provides the foundation for digitalisation. QSC boosted revenues in its Cloud segment from quarter to quarter in 2018 and ultimately achieved year-on-year growth of 31%.



QSC made progress in all business units in 2018. Particularly dynamic developments were seen in the Cloud and IoT business, where revenues in each individual quarter were well ahead of the previous year's figures.




**Smart IoT solution for energy management**

In early February, Q-loud presented an all-round solution for recording, analysing and checking energy consumption at highly automated companies. This offers a cutting-edge solution, particularly for smaller businesses.

**Upgrading company networks at Creditreform**

This credit agency and debt collection service provider can now look forward to advancing its digitalisation projects at up to 1,000 Mbit/s. In March, this long-standing customer extended the term and scope of its managed network services contract with QSC.

**Launch of SAP HANA at SportScheck**

By analysing its data in real time, SportScheck aims to react even faster and more closely to its customers' needs. QSC is accompanying SportScheck, one of Germany's largest sports item retailers, in converting its database system and will provided various SAP systems from the cloud in future.

Year-on-year revenue growth in Cloud segment


**Q-loud's "EnergyCam" in use at Munich Airport**

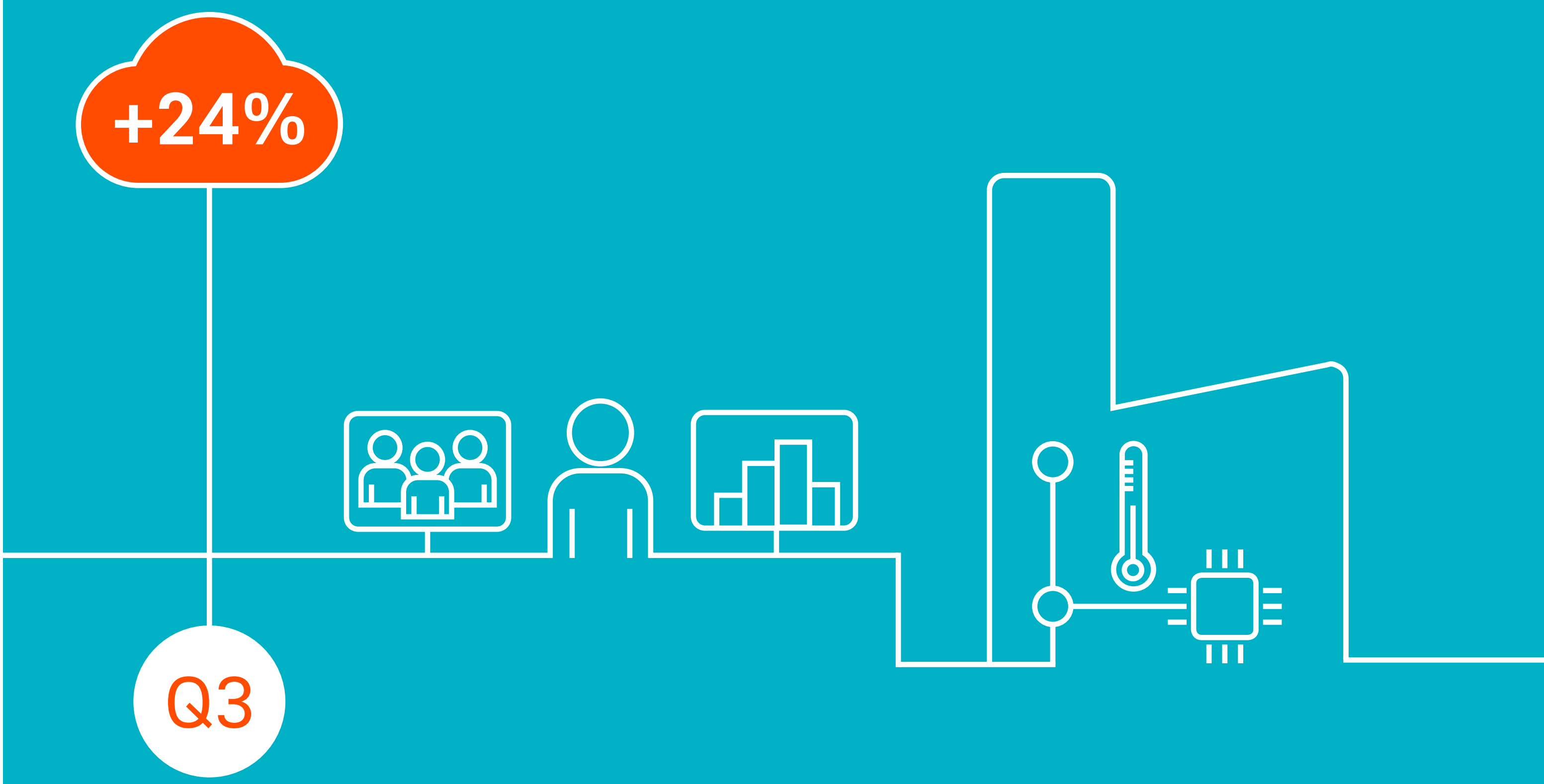
Airports have particularly strict security requirements. So it is all the more remarkable that IoT devices are being put to live use for the first time with a new transmission standard at Munich Airport. Since the launch date, Q-loud's "EnergyCams" have digitalised data from analogue electricity meters and transmitted this to a cloud.

**Multi-cloud deployed at IKB Leasing**

In June, QSC gained PEAC Germany as a customer. The cooperation with this company, previously known as IKB Leasing, will focus on migrating the existing IT landscape into a multi-cloud environment. To this end, QSC will combine proprietary cloud solutions with services from large public cloud providers.

**Imperial Tobacco builds on cloud and multi-cloud services**

QSC will be responsible for the major share of IT operations and IT support at Imperial Tobacco for the next five years as well. The new contract also provides for gradually introducing cloud and multi-cloud services at this British company.




**One cloud solution for all communications channels**

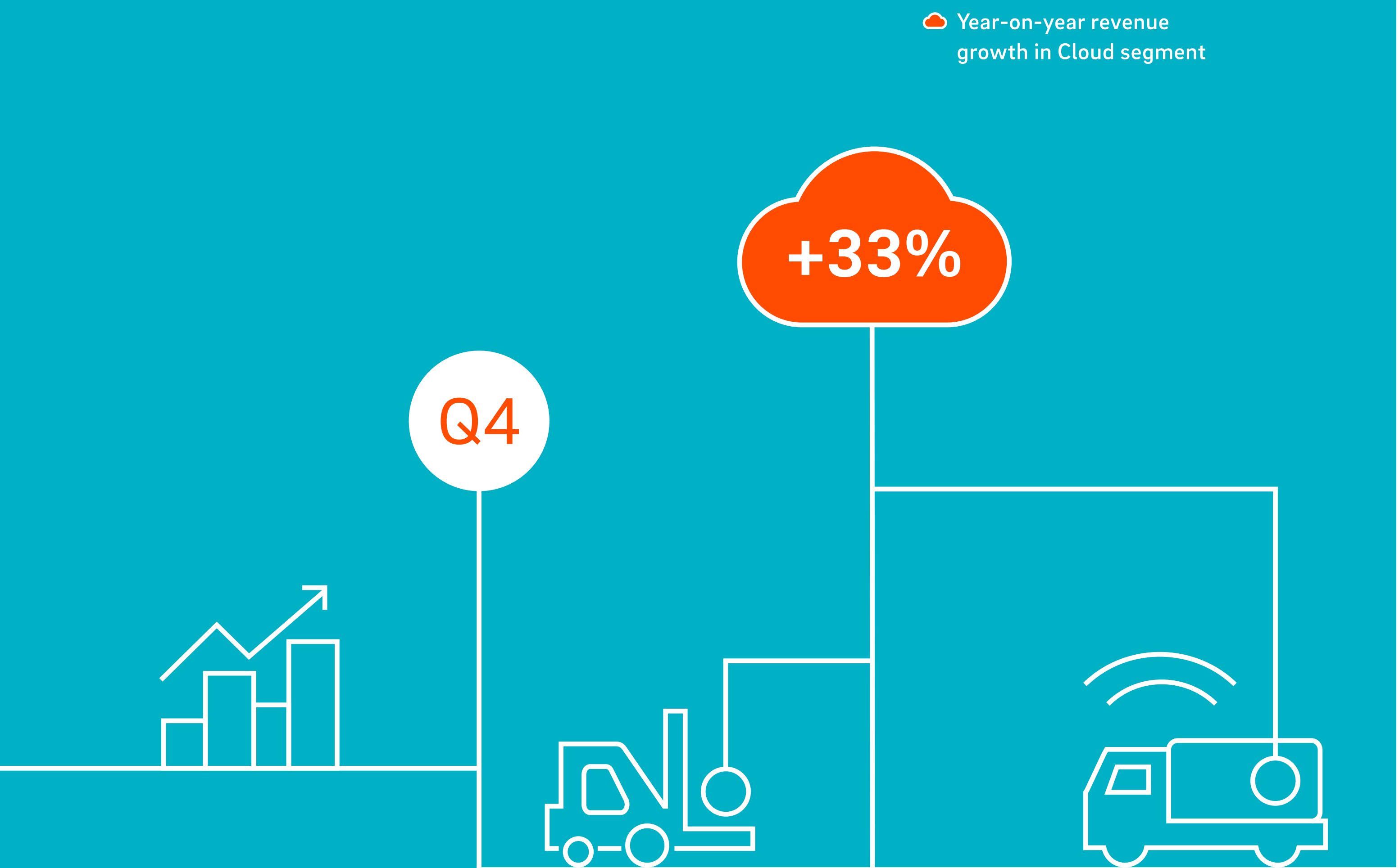
QSC has long been a pioneer when it comes to combining cloud and TC technologies. The new UCC (Unified Communications and Collaboration) solution combines telephony, video and chat offerings and supplements these with video conferencing, file sharing and numerous other services.

**Spin-off of TC business executed**

Having gained approval from the Annual General Meeting in July 2018, QSC spun off its TC business to its wholly-owned subsidiary Plusnet as of 31 August. Since then, Plusnet has operated in the market under its own brand.

**Germany's first qualified SAP Leonardo solution**

In September, QSC unveiled its Energy Management Cockpit, which works with the new SAP Leonardo environment, and underlined its pioneering role in combining IoT and SAP expertise. The Cockpit provides companies with real-time visibility concerning their energy consumption across several locations.




**Revenue forecast raised for second time**

To account for dynamic growth in its Cloud business and higher TC revenues, in November QSC raised its full-year revenue forecast for 2018 for the second time. Having forecast a figure of more than € 360 million, QSC then reported revenues of € 366.8 million for the past financial year.

**QSC singled out as "Leader" for SME cloud services**

The market researcher and consultancy ISG has identified QSC as a German "leader" for cloud-based infrastructure services. The experts also see QSC as a "Rising Star" when it comes to supporting SME players in moving forward to the cloud age.

**Innovative tracking solution at Q-loud**

The NB-IoT Tracker, a cigarette packet-sized device, enables companies to permanently monitor the status and position of all kinds of equipment and machines. The tracker is significantly less expensive and more energy efficient than traditional solutions.

JÜRGEN HERMANN,
CHIEF EXECUTIVE OFFICER

STEFAN A. BAUSTERT,
CHIEF FINANCIAL OFFICER

“THE STRONG GROWTH IN OUR CLOUD BUSINESS MARKS THE BEGINNING. WE WILL BE BUILDING ON THIS IN THE CURRENT FINANCIAL YEAR.”

Dear Shareholders,

The progress made in our Cloud business was the distinguishing feature of our 2018 financial year. Revenues here grew by 31% to € 36.5 million. And we expect to see even greater dynamism in the current year. We have set a target of around € 50 million for our Cloud revenues, which would correspond to growth of more than 35%. Our strategy of acting early to position ourselves as the digitaliser to the German SME sector is paying off. Drawing on our support, more and more SME players are successfully advancing into the digital age and, in parallel, migrating their IT to the cloud.

Our Cloud Services are attracting new customers. In 2018, for example, the financial services provider PEAC Germany, previously known as IKB Leasing, commissioned us to migrate its IT landscape into a multi-cloud environment.

Beyond that, we are migrating IT at our existing outsourcing customers and in some cases also extending the range of services we provide – as is the case with Imperial Tobacco. For this long-standing customer, QSC will in future not only be networking its German locations, providing applications and SAP services and supporting ongoing operations. We will also gradually be introducing cloud and multi-cloud services. This is not the only area in which the boundaries between traditional outsourcing and innovative cloud solutions are becoming increasingly blurred.

Q-loud, our IoT subsidiary, also made promising progress in 2018 and demonstrated its competence in numerous pilot projects. Its pragmatic "retrofit" approach, which involves drawing on simple tools to make older appliances fit for digitalisation, has been particularly well received. Q-loud has supplemented this approach with innovations such as its "NB-IoT Tracker". Working with an integrated narrowband wireless module, this tracker can be operated for longer periods and more inexpensively than traditional modules. This way, it enables the position and status of machines and equipment to be identified and checked over periods of years. Not only that, our experts at Q-loud are in great demand as partners when it comes to linking up IoT solutions with SAP systems. With its "QSC Energy Management Cockpit" unveiled in September, for example, Q-loud presented the first qualified solution for the new SAP Leonardo environment. This solution provides companies with real-time visibility of their energy consumption across several locations.

"THE BOUNDARIES BETWEEN TRADITIONAL OUTSOURCING AND INNOVATIVE CLOUD SOLUTIONS ARE INCREASINGLY BLURRED."

“QSC EXCEEDED ITS ORIGINAL OVERALL REVENUE FORECAST.”

Our Telecommunications business attracted great attention in the past year. Specifically, a temporary rise in demand for international voice termination services helped QSC to significantly increase its TC revenues in 2018 and thus exceed its original overall revenue forecast. Equally pleasing were the developments in the business with municipal utility companies and other regional providers. Here, QSC clearly benefits from its network operations competence. With its wide range of services, it is increasingly establishing itself as a preferred partner for municipal companies.

Based on the approval you, the shareholders, provided at last year’s Annual General Meeting, the entire TC business has been pooled at our wholly-owned subsidiary Plusnet. In September 2018, we decided to initiate talks on the potential sale of a majority or the entirety of this company. This decision was triggered by the expressions of interest received from various companies whose business models fit well with Plusnet’s. The outcome of this process is by no means predetermined. That means we are also pursuing other strategic options for Plusnet’s future, such as working on the further independent development of the business or entering into cooperations. We intend to reach a decision on this no later than the end of May and thus in good time for this year’s Annual General Meeting.

The decision we take may influence the forecast for our business performance in 2019. At present, we expect QSC to generate revenues of more than € 350 million, EBITDA in excess of € 65 million and further positive free cash flow. The EBITDA target is only comparable with the previous year’s figure to a limited extent, as QSC will be applying a new IFRS lease accounting standard for the first time in 2019. First-time application of IFRS 16 is expected to inflate EBITDA by between € 30 million and € 35 million.

Our revenue performance in the current year will once again be shaped by further progress in our Cloud business. Dynamic developments here will nevertheless not yet suffice to offset the decline in our traditional Outsourcing business – due to the loss of two major customers already announced in good time – and the normalisation of international voice termination services in the TC business. In the ongoing process of restructuring our Outsourcing business, we will benefit from new management. Here, we have hired an experienced IT manager who will enhance the structure of the traditional Outsourcing business and forge even closer links with the Cloud business.

“OUR VERTICAL ORGANISATIONAL STRUCTURE HAS NOTICEABLY BOOSTED OUR EFFECTIVENESS.“

We attracted a proven IoT expert as the new Managing Director at Q-loud in autumn 2018. She sees great opportunities for the business, above all in the field of smart Industry 4.0 solutions. Being part of the QSC family provides Q-loud with a crucial competitive advantage here. Our subsidiary scores highly with its own IT and automation competence. Over and above that, it can also safeguard the integration of IoT solutions in SAP environments.

Our new vertical organisational structure has noticeably boosted our effectiveness. Our business units now act with considerably greater autonomy and their flat hierarchies have accelerated decision-making processes. And precisely that promotes uncomplicated cooperation across the boundaries of individual departments and business fields. We would like to sincerely thank all of our employees for their achievements, their commitment and their willingness to cooperate. And we owe our particular thanks of course to our customers. Their trust is the foundation of our success.

We would also like to thank you – our shareholders. You have accompanied us through the difficult years of our transformation into an ICT and Cloud Service provider and now look forward, perhaps with growing impatience, to this process being reflected in a higher share price. As we see it, two factors still stand in the way. The capital market is awaiting a decision on the future of Plusnet and many investors view sustainable revenue growth as a precondition for any investment.

The strong growth in our Cloud business marks the beginning. In 2019, we will be building on this – with clear decisions and by setting QSC on course for sustainable growth.

Cologne, 20 March 2019

Jürgen Hermann
Chief Executive Officer

Stefan A. Baustert
Chief Financial Officer

# CONTENTS

# THE MANAGEMENT BOARD


JÜRGEN HERMANN


STEFAN A. BAUSTERT

**Jürgen Hermann (*1964), Chief Executive Officer**

The digital world is QSC's future. Since taking over as CEO in May 2013, Jürgen Hermann, a prime mover at QSC, has pressed consistently ahead with aligning the Company's strategy to the needs of the German SME segment in the digital age. The key focus here from the very outset has been the cloud – the keystone for digitalisation at companies – and this is precisely where QSC is now generating its highest growth rates. Alongside strategy, this graduate in economics also bears management board responsibility for the key topics of innovation and communications. Having held senior positions for several years at Thyssen Telecom AG, he joined what was then QS Communication Service GmbH back in 1997. As Head of Finance, he played a key role in organising QSC's IPO in April 2000 and was the Company's Chief Financial Officer from 2009 to 2013.

**Stefan A. Baustert (*1956), Chief Financial Officer**

Things move fast in the digital world. To build sustainable success in this environment, companies need efficient structures and solid financing. This is exactly what Stefan A. Baustert, a graduate in business administration, has worked to achieve since becoming CFO at the beginning of 2015. In addition to finance, he also holds management board responsibility for procurement, human resources and investor relations. His previous positions include working as CEO at the publicly listed company Singulus Technologies AG, as Commercial Director at E-Plus Mobilfunk GmbH and, at the beginning of his career, in various management positions at the Thyssen-Krupp Group, where he was latterly CFO at the Thyssen Telecom AG subsidiary.

# THE SUPERVISORY BOARD

The six-member Supervisory Board comprises four shareholder and two employee representatives. At the Annual General Meeting held in Cologne on 12 July 2018, shareholders re-elected their existing representatives. Their terms in office run until the conclusion of the Annual General Meeting for the 2022 financial year. The employees had selected their two representatives in advance of the meeting.

**Dr. Bernd Schlobohm, Chairman**
Dr. Schlobohm, who holds a doctorate in engineering, founded QSC in 1997, had the Company publicly listed in April 2000, and then managed it as CEO until May 2013. Together with QSC's co-founder, Gerd Eickers, he is the largest shareholder. At the end of 2018, these two shareholders held a combined stake of 25% in QSC.

**Dr. Frank Zurlino, Deputy Chairman**
Dr. Zurlino, holder of a doctorate in business engineering, was elected to the Supervisory Board in May 2013. Formerly head of strategy consulting and development at IBM Deutschland, he is now Managing Partner at the international management consultancy Horn & Company.

**Gerd Eickers**
QSC's second founder, Gerd Eickers, moved to the Supervisory Board in June 2004 after three years on the Management Board. In subsequent years, this graduate in economics played a major role in shaping the political framework for the TC market, particularly in his capacity as President of the Association of Telecommunications and Value-Added Service Providers (VATM).

**Ina Schlie**
Ina Schlie, Senior Vice President Digital Government – Head of Government Relations MEE at the SAP software group, has been a member of the Supervisory Board since September 2012. Drawing on her previous experience as the long-standing head of the group tax department at SAP, she also chairs the Audit Committee.

**Anne-Dore Ahlers** (until 12 July 2018)
Anne-Dore Ahlers, the long-standing Chair of the Works Council, retired at the end of 2018. QSC's workforce had elected the Hamburg-based IT consultant as one of its two representatives on the Supervisory Board for a 5-year term in 2013.

**Matthias Galler** (from 12 July 2018)
In June 2018, QSC's workforce elected the Hamburg-based Works Council Chairman as a new member of the Supervisory Board. A senior IT consultant, Matthias Galler has worked at the Company since 2002.

**Cora Hödl**
QSC's employees once again elected Cora Hödl, Head of Technology/Infrastructure & Voice at the TC subsidiary Plusnet, as its second representative on the Supervisory Board. Based in Cologne, the qualified communications electrician has also worked at QSC since 2002.

# REPORT OF THE SUPERVISORY BOARD

DR. BERND SCHLOBOHM,
SUPERVISORY BOARD CHAIRMAN

Dear Shareholders,

The following Supervisory Board Report informs you about the activities of the Supervisory Board in the 2018 financial year.

**Activities of the Supervisory Board.** The Supervisory Board performed all of the duties incumbent on it by law and the Articles of Association once again in 2018. It continually monitored and advised the Management Board in its management of QSC AG and the Group. It was directly involved in all decisions and measures of material significance, particularly those impacting on the Company's financial position, financial performance and cash flows. After careful consideration, it voted on all measures for which its consent is required by law, the Articles of Association and the Rules of Procedure of the Management Board.
The members of the Management Board attended the meetings of the Supervisory Board unless stipulated otherwise by the Supervisory Board Chairman. At these joint meetings, the Supervisory and Management Boards discussed key aspects of the Company's business policy and strategy, as well as its performance and planning. Moreover, the Chairs of the two boards were in regular contact to discuss topics arising between Supervisory Board meetings.
The Management Board informed the Supervisory Board with regular, timely and detailed reports, both written and oral, about the Company's business performance, drawing in particular on monthly and quarterly financial statements and rolling budget/actual comparisons. The Management Board reports also included information about variances in the actual business performance from targets previously reported and variances in the business performance from the planning. The reports also included all relevant information concerning the Company's strategic development and planning, risk situation, risk management and compliance. All enquiries and requests for additional information by the Supervisory Board were promptly and thoroughly answered by the Management Board.

**Topics addressed by the Supervisory Board.** The main focuses of Supervisory Board meetings and resolutions in the 2018 financial year were:

1. **Current revenue and earnings performance and new vertical organisational structure.** The Supervisory Board ensured that it was continually informed about the performance of the operating business and also obtained regular reports from the Management Board on the personnel situation in individual business areas. Furthermore, the Supervisory Board dealt with the implications of the new vertical organisational structure for the Company's operations. This is intended to provide individual business units with a more agile and customer-focused market presence.

2. **Spin-off of Telecommunications business.** One particular focus of deliberations in the Supervisory Board, as well as of the resolutions it adopted, related to the spin-off of the Telecommunications business to Plusnet GmbH. By resolution dated 14 May 2018, the Supervisory Board approved the conclusion of a spin-off and takeover agreement with Plusnet GmbH and adopted its draft resolution in this respect for approval by the Annual General Meeting. The Annual General Meeting held on 12 July 2018 also approved the spin-off with a large majority, enabling this measure to be executed on schedule as of 31 August 2018. As various companies with business models complementary to that of Plusnet GmbH had voiced their interest in acquiring the company, the Management Board resolved to take up talks with suitable interested parties concerning this strategic option. On 18 September 2018, the Management Board informed the Supervisory Board of its decision. Following in-depth discussion, the Supervisory Board approved the initiation of talks. At its final scheduled meeting in the period under report, the Supervisory Board obtained a report on the status of the talks and held joint discussions with the Management Board on matters relating to the Company's strategy and its planning.

3. **Financing.** Given that tranches of the promissory note bond were due to mature in May 2019, the Supervisory Board ensured that it was kept regularly informed about the status of refinancing measures. QSC acted early to secure its refinancing by successfully negotiating an increase in its syndicated loan in the first half of 2018 already. Originally agreed in 2016 at an amount of € 70 million, this facility was stocked up to € 100 million.

4. **Management Board compensation.** On 14 March 2018, the Supervisory Board discussed the Management Board's target achievement and determined its variable compensation for the 2017 financial year. It also addressed the new agreements for the 2018 annual targets and the multiyear targets for the period from 1 January 2018 to 31 December 2020 and decided in this regard to follow the corresponding recommendation made by the Human Resources Committee. The Supervisory Board Chairman was authorised to conclude the respective target agreements with the Management Board members.

5. **Supervisory Board elections.** In preparation for the election of shareholder representatives to the Supervisory Board which were due to take place at the Annual General Meeting on 12 July 2018, following advance discussions in the Nomination Committee the Supervisory Board dealt in detail with its election proposals for the Annual General Meeting. Consistent with the recommendation submitted by its Nomination Committee, the Supervisory Board proposed to the Annual General Meeting that all existing shareholder representatives should be re-elected.
   In selecting the candidates to be nominated for election by the Annual General Meeting, the Supervisory Board took due account of the targets it had previously set for its composition, including the competence profile for the Supervisory Board as a whole. Due to her previous professional activities in the field of tax at SAP SE and as a former consultant at a well-known auditing firm, Ina Schlie qualifies as a financial expert. Two shareholder representatives counting as independent based on the definition provided in the German Corporate Governance Code, namely Ina Schlie and Dr.-Ing. Frank Zurlino, were proposed for election.
   All candidates were elected by the Annual General Meeting with large majorities.

6. **Risk management, compliance and General Data Protection Regulation.** Furthermore, the Supervisory Board dealt once again in 2018 with the internal control mechanisms at QSC AG, and here in particular with the risk management system and with processing the internal audit plan compiled for 2018. The Supervisory Board also obtained information about the newly established whistleblowing system, as well as about implementation of the requirements of the new General Data Protection Regulation, which took effect in May 2018. The Supervisory Board reviewed the risk management system on the basis of submissions and Management Board reports and discussed these topics with the Management Board. The Supervisory Board is of the opinion that the internal control and early warning risk identification systems operate reliably.

**Composition of the Supervisory Board.** Following the execution of status proceedings initiated by announcement of the Management Board on 16 January 2018 and based on the requirements of the German Stock Corporation Act (AktG) and the German One-Third Participation Act (Drittelbeteiligungsgesetz), the Supervisory Board continues to comprise four shareholder representatives and two employee representatives. The term in office both of the shareholder representatives in the Supervisory Board (Dr. Bernd Schlobohm, Gerd Eickers, Ina Schlie and Dr.-Ing. Frank Zurlino) and of the employee representatives (Anne-Dore Ahlers und Cora Hödl) expired upon the conclusion of the Annual General Meeting on 12 July 2018. This Annual General Meeting elected all shareholder representatives for a term in office running until the conclusion of the Annual General Meeting due to adopt a resolution on the approval of their actions for the 2022 financial year. The workforce at QSC AG and its group companies re-elected Cora Hödl and newly elected Matthias Galler as the employee representatives on the Supervisory Board for the same term in office. The Supervisory Board would like to thank Anne-Dore Ahlers for the great commitment she showed to the activities of the Supervisory Board and for the strong working relationship. At its constitutive meeting on 12 July 2018, the Supervisory Board once again elected Dr. Bernd Schlobohm as Supervisory Board Chairman and Dr.-Ing. Frank Zurlino as Deputy Supervisory Board Chairman and determined the composition of the committees established by the Supervisory Board.

**Supervisory Board meetings and committees.** In the 2018 financial year, the Supervisory Board held four scheduled meetings attended in person, one unscheduled meeting by conference call and its constitutive meeting, which was also attended in person. All meetings were attended by all members. Where necessary, the Supervisory Board also adopted resolutions on individual topics by circulating and approving the respective documents.

To assist it in its work, the Supervisory Board has formed four committees. These are the Human Resources Committee, the Audit Committee, the Nomination Committee and the Strategy Committee. The Chairs of the respective committees regularly report to the full Supervisory Board on the work of their committees. All committee members attended all meetings of their respective committees in 2018.

The **Human Resources Committee** met once in the year under report and prepared the Supervisory Board decisions concerning the target achievement of Management Board members in the 2017 financial year and the Management Board agreements for the 2018 annual targets and the multiyear targets for the period from 1 January 2018 to 31 December 2020. The membership of this committee, which is unchanged, comprises Dr. Bernd Schlobohm (Chair), Gerd Eickers and Cora Hödl.

The composition of the **Audit Committee** is also unchanged; its members are Ina Schlie as its Chair and independent financial expert, as well as Dr. Bernd Schlobohm and Dr.-Ing. Frank Zurlino. The Audit Committee monitors the financial reporting process and may submit recommendations to safeguard its integrity. It also monitors the effectiveness of the internal control, risk management and internal audit systems, as well as compliance, and prepares all decisions required by the full Supervisory Board in this respect. The Audit Committee also deals with the audit of the financial statements and is responsible for selecting and issuing the audit assignment to the auditor, as well as for monitoring the auditor's independence. It decides whether the Company may commission the auditor to provide non-audit services and, where appropriate, monitors the auditor's provision of such services.

The Audit Committee held five meetings in the past financial year. It reviewed the documents relating to the annual and consolidated financial statements, including the dependent company report, for the 2017 financial year, held in-depth discussions about these documents and the accompanying audit reports in the presence of the auditor and adopted recommendations for the full Supervisory Board resolution concerning the annual and consolidated financial statements and their audit. Prior to publication of the respective documents, the Management Board discussed the half-year financial report as of 30 June 2018 and the interim statements as of 31 March and 30 September 2018 with the Audit Committee. The committee also dealt with the planning of the audit and key audit focuses for the 2018 financial year and negotiated and concluded the auditor's fee agreement.

The Audit Committee had already performed the tender and selection process required by the EU Audit Regulation for the Company's 2018 financial statement audit assignment in the 2017 financial year. The Supervisory Board followed the substantiated recommendation and preference submitted by the Audit Committee and proposed that the Annual General Meeting on 12 July 2018 should once again elect KPMG AG Wirtschaftsprüfungsgesellschaft, which is headquartered in Berlin and has a branch office in Cologne, as auditors and group auditors for the 2018 financial year.

The task of the **Nomination Committee** is to propose suitable candidates to the full Supervisory Board for its nomination of candidates at any forthcoming election of shareholder representatives to the Supervisory Board at the Annual General Meeting. The composition of the Nomination Committee has not changed; its members are still Gerd Eickers (Chair) and Dr.-Ing. Frank Zurlino. The Nomination Committee met once in the 2018 financial year in order to prepare the scheduled election of shareholder representatives to the Supervisory Board by the Annual General Meeting on 12 July 2018.

The composition of the **Strategy Committee** is also unchanged; its members are Dr. Bernd Schlobohm (Chair) and Dr.-Ing. Frank Zurlino. The Strategy Committee has a purely advisory function and addresses the strategic, and thus long-term, development of QSC AG. The Committee held three meetings in 2018 and dealt in particular with the spin-off of the telecommunications business to Plusnet GmbH and the progress made in the operating business, and here especially with the further development of the Cloud segment with its two focuses of Cloud Services and IoT.

**Corporate governance.** In keeping with new legal requirements, at the beginning of 2018 the Supervisory Board adopted a diversity concept for the Management Board, which has been reported on in the Corporate Governance Report. The Supervisory Board continuously monitors the status and development in the German Corporate Governance Code and the implementation of the Code's recommendations at QSC AG. At its meeting on 22 November 2018, the Supervisory Board acting together with the Management Board submitted its annually updated Declaration of Compliance pursuant to § 161 AktG. This is permanently available on the Company's website.

The Management Board reports in detail on corporate governance, also on behalf of the Supervisory Board, in the Corporate Governance Report within the Group Management Report. Each member of the Supervisory Board discloses any conflicts of interest that may arise, taking due account of the recommendations made in the German Corporate Governance Code. No conflicts of interest arose in the year under report.

**Audit of financial statements.** KPMG AG Wirtschaftsprüfungsgesellschaft, headquartered in Berlin and with a branch office in Cologne, audited both the annual financial statements of QSC AG as of 31 December 2018 prepared by the Management Board in accordance with the requirements of the German Commercial Code (HGB) and the consolidated financial statements as of 31 December 2018 prepared in accordance with International Financial Reporting Standards

(IFRS) as requiring application in the European Union and the supplementary provisions of German commercial law applicable pursuant to § 315e of the German Commercial Code (HGB), as well as the management and group management reports. The audit assignment was tendered and subsequently awarded by the Audit Committee in accordance with the requirements of the EU Audit Regulation and in line with the resolution adopted by the Annual General Meeting on 12 July 2018.
Key audit matters for 2018 included the recoverability of the equity interest held in Plusnet GmbH in the case of the annual financial statements and the recoverability of goodwill recognised in the case of the consolidated financial statements. The auditor granted unqualified audit opinions to the Company's annual financial statements (HGB) and consolidated financial statements (IFRS) for the 2018 financial year, including the respective management reports. Furthermore, the Management Board compiled a report on relationships with affiliated companies for the 2018 financial year (dependent company report). The auditor audited this report, reported in writing on its findings and granted the following unqualified opinion:

"Based on our audit and assessment performed in accordance with professional standards, we confirm that
1. the factual information in the report is correct
2. the Company's compensation with respect to the transactions listed in the report was not incommensurately high."

The aforementioned documents, including the audit reports submitted by the auditor, were provided to all Supervisory Board members in good time ahead of their review. At its meeting on 20 March 2019, the Supervisory Board discussed all of these documents and the auditor's reports with the Management Board and the auditor, taking due account of the findings of the preliminary review conducted by the Audit Committee. The Supervisory Board also reviewed the non-financial declaration and group declaration. Furthermore, it reviewed and discussed the Management Board's proposal concerning the appropriation of profit. The auditor reported to the meeting on its key audit findings and was available to answer questions and provide further information. The auditor also reported on the audit of the internal control system in respect of the financial reporting process and the risk management system. It informed the Supervisory Board of services it provided in addition to the audit of the financial statements and that there were no circumstances indicating that its impartiality was impaired.
Having conducted its own review, the Supervisory Board did not raise any objections to the annual financial statements (HGB) of QSC AG for the 2018 financial year, the consolidated financial statements (IFRS), the management report of QSC AG or the group management report and concurs with the findings of the audit performed by the auditor. Consistent with the recommendation made by the Audit Committee, the Supervisory Board therefore approved the consolidated financial statements (IFRS) and the annual financial statements (HGB). The annual financial statements are thus adopted. The review of the non-financial declaration and group

declaration by the Supervisory Board also did not lead to any objections. With due consideration of the interests of shareholders and of QSC AG, the Supervisory Board endorses the appropriation of profit proposed by the Management Board. The Management and Supervisory Boards will propose the distribution of € 0.03 per share with corresponding entitlement for approval by the Annual General Meeting on 29 May 2019.

Following its own review, the Supervisory Board also approved the Management Board's report on relationships with affiliated companies and concurred with the findings of the audit of the report by the auditor. Based on this review, the Supervisory Board established that no objections were to be raised against the declaration by the Management Board at the end of the report on relationships with affiliated companies.

The Supervisory Board would like to thank all shareholders for their continued trust, and that despite the volatile stock market climate in 2018. We owe our particular thanks to all employees and the members of the Management Board for their achievements and the dedication they showed in the past financial year.

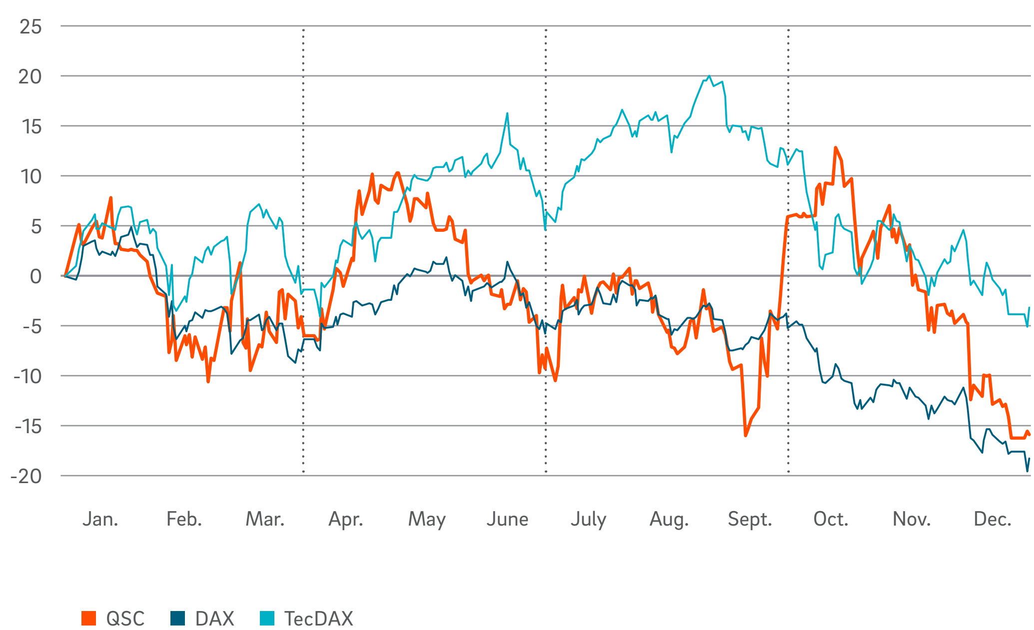
Cologne, 20 March 2019
On behalf of the Supervisory Board of QSC AG

Dr. Bernd Schlobohm
Supervisory Board Chairman

# QSC SHARE PERFORMANCE

**Turbulent year on the stock markets in 2018.** The growing risk of recession in many industrialised economies, the threat of trade wars, the discussions surrounding Brexit – these and other external factors repeatedly led to reversals on global stock markets in 2018. In this climate, even pleasing corporate news was often quickly forgotten. The DAX – Germany's lead index with its heavy weighting of cyclical and export-dependent stocks – lost ground, particularly in the second half of the year, and closed at 10,559 points, 18% down on the previous year's figure. The TecDAX also faced considerable setbacks in the second half of the year. At 2,450 points, however, the tech stock index closed the year just 3% down on the previous year.

**QSC's share price performance**
(indexed)




In the fourth quarter of 2018, by contrast, QSC shares were unable to defend the gains made in the intervening period. They closed at € 1.27 on 28 December 2018, 16% down on the previous year's figure. Tracking the overall market, the share price already lost notable ground in the first months of 2018. It subsequently witnessed periods of improvement, particularly in the spring and autumn. This temporary recovery was due not least to the positive news published by the company. QSC reported year-on-year revenue growth in each of the first, second and third quarters and even raised its revenue forecast twice to account for these developments. In September, the Company also announced the initiation of talks on the potential sale of a majority or all of Plusnet, its wholly-owned TC subsidiary. In subsequent weeks, QSC's share price rose to its annual high of € 1.72 before falling more sharply than the overall market towards the end of the year. The lower share price also left its mark on 2018 trading volumes, which totalled € 103.3 million as against € 258.8 million in the previous year.

**Bankhaus Lampe recommends buying QSC shares.** A study published by Bankhaus Lampe at the beginning of July 2018 lent temporary upward momentum to the share price. In this study, titled "Spin-off should trigger revaluation", the analyst pointed to the opportunities which spinning off the TC business would create for QSC shares. His conclusion: "Buy". In September 2018, he raised his share price target by a further 10 cents to Euro 2.00. The four other analysts regularly covering the Company recommended holding QSC shares. With five analysts, QSC continues to enjoy a comparatively high level of attention for what is a second-tier stock, particularly given that the new MiFID regulations in force since the beginning of 2018 have made it harder for banks to market their research.

### Financial institutes with studies on QSC

| | | |
|---|---|---|
| Bankhaus Lampe | Independent Research | Warburg Research |
| Commerzbank | Oddo BHF | |

**High weighting of retail investors.** The majority assessment reached by analysts confirmed numerous fund managers in their reserved stance towards QSC. The percentage of free float shares held by institutional investors slipped by 3 percentage points to 27% during 2018. Two institutional investors, namely the Dutch fund provider Kempen Capital Management and the US fund Dimensional Holding, each held more than 3% of QSC's shares at the end of 2018. At the beginning of 2019, Kempen Capital Management informed QSC that it had fallen short of this disclosure threshold. This meant that retail investors held the majority of the free float shares once again in 2018. According to the Company's share register, this class of shareholders owned 73% of QSC's shares as of 31 December 2018. Overall, free float shares make up 75% of QSC's total shares and are distributed among 27,333 shareholders.

A total of 25% of QSC's shares are still held by the Company's two founders Gerd Eickers and Dr. Bernd Schlobohm. Now members of QSC's Supervisory Board, these two individuals have not sold any shares since the Company's IPO in spring 2000. On the contrary, they have increased their shareholdings further. In 2018, QSC's CEO Jürgen Hermann increased his investment once again and acquired a further 200,000 shares in the Company. With 600,000 QSC shares, he now owns a stake of just under 0.5% in the Company.

**25%**

**of QSC's shares are still held by the two founders**

**Shareholder structure as of 31 December 2018**


**3 cents**

**dividend proposal for 2018**

**QSC pays a stable dividend.** The distribution of a dividend is an important criteria for investors, and especially for retail investors, when deciding whether to buy and hold shares. QSC has enabled its shareholders to participate in the Company's performance for many years now, and also upheld dividend payments during its far-reaching restructuring process. For the 2018 financial year, the Management and Supervisory Boards will once again propose the payment of a dividend of 3 cents per share for approval by the Annual General Meeting.

QSC views the Annual General Meeting as providing an important platform for dialogue with its owners. Last year's AGM was attended by 225 shareholders, who re-elected the existing four shareholder representatives to the Supervisory Board with large majorities. Shareholders also approved the spin-off of the TC business and all other agenda items with large majorities in each case.

**Variety of communications with investors.** During the financial year, QSC maintains an ongoing dialogue with its retail and institutional investors by mail and telephone. The Company draws on a variety of social media channels to keep capital market participants up to date. In the QSC Blog, the IR manager keeps readers posted about developments including the latest share price performance. News items are published in the IR Newsletter and on QSC's Twitter channel, while all Company presentations are available on SlideShare.

The IR section of QSC's website acts as the central information platform. As well as financial reports and press releases, this section also includes information about the shares, the consensus among analysts, corporate governance and much more. This is also where the presentations and recordings of comments made by members of the Management Board in conference calls can be found following the publication of quarterly results.

WWW.TWITTER.COM/QSCIREN
WWW.SLIDESHARE.NET/QSCAG
WWW.QSC.DE/EN/INVESTOR-RELATIONS

One key focus of the Management Board in its investor relations activities is on maintaining direct contact with institutional investors. The dialogue with this target group was promoted by, among other measures, taking part in capital market conferences organised by Bankhaus Lampe, Berenberg Bank, Commerzbank and Oddo BHF, as well as in roadshows at leading European financial centres. These activities were supplemented by numerous one-to-one talks at the Company's locations in Cologne and Hamburg and in conference calls.

**Key facts about QSC shares**

| | |
|---|---|
| Securities identification code | 513 700 |
| ISIN | DE0005137004 |
| Trading symbol | QSC |
| Bloomberg symbol | QSC GR |
| Reuters symbol | QSCG.DE |
| Market segment | Prime Standard |
| Stock exchanges | Xetra and regional German stock exchanges |
| Designated sponsorship | Oddo Seydler Bank AG |
| Shares outstanding as of 31 December 2018 | 124,172,487 |
| Share class | No-par-value registered shares of common stock |
| Xetra closing price on 29 December 2017 | € 1.51 |
| Xetra share price high in 2018 | € 1.72 |
| Xetra share price low in 2018 | € 1.24 |
| Xetra closing price on 28 December 2018 | € 1.27 |

# GROUP MANAGEMENT REPORT

# GROUP FUNDAMENTALS

## Business Activities

**QSC is digitising the German SME sector.** With decades of experience and expertise in its Cloud, Internet of Things, Consulting, Telecommunications and Colocation businesses, QSC accompanies its customers securely into the digital age. The cloud-based provision of all services offers increased speed, flexibility and availability. The Company's TÜV and ISO-certified data centres in Germany and its nationwide All-IP network form the basis for maximum end-to-end quality and security. QSC's customers benefit from one-stop innovative products and services that are marketed both directly and via partners. The Company divides its operating business into the four segments described below.

**Cloud – the motor of digitalisation.** In this, its fastest-growing segment, QSC pools all Cloud Services and all activities relating to the Internet of Things (IoT). With its Cloud Services, QSC supports companies in gradually advancing into the digital age. Customers can procure all major IT functions as turnkey cloud modules. These range from virtual IT workplaces and sophisticated business applications to flexible IT resources through to comprehensive communication and network services. Individual customers decide which infrastructure they would like to draw on, as all services are already designed to cover the latest multi-cloud deployment scenarios. This way, QSC can also smartly integrate and orchestrate entirely different cloud worlds on behalf of its customers.

**IoT portfolio at Q-loud is mainly based on in-house developments**

At core, the IoT portfolio pooled at QSC's subsidiary Q-loud is also the result of in-house development work. Q-loud enables customers to rapidly move their products and business models into the Internet of Things, and that on a scalable and secure basis that does not involve any risk. Q-loud's extensive and well-coordinated portfolio is designed to meet the needs of small and medium-sized enterprises and includes hardware and software services, as well as integration, production and operations.

**Outsourcing – moving step by step into the digital age.** The Outsourcing segment chiefly involves QSC performing IT services and storing data on behalf of other companies. It also covers IP-VPN networking for outsourcing customers. Customers are absolutely free to select the structure of their IT processes and themselves determine the direction and speed at which their IT is transformed and moved into the digital world. Outsourcing services offered by QSC also include managing basic IT and horizontal services, business-critical applications, stationary and mobile terminals, cutting-edge collaboration solutions and professional IT service management with 24/7 service. If customers so wish, QSC can also assume responsibility for operating the entire infrastructure.

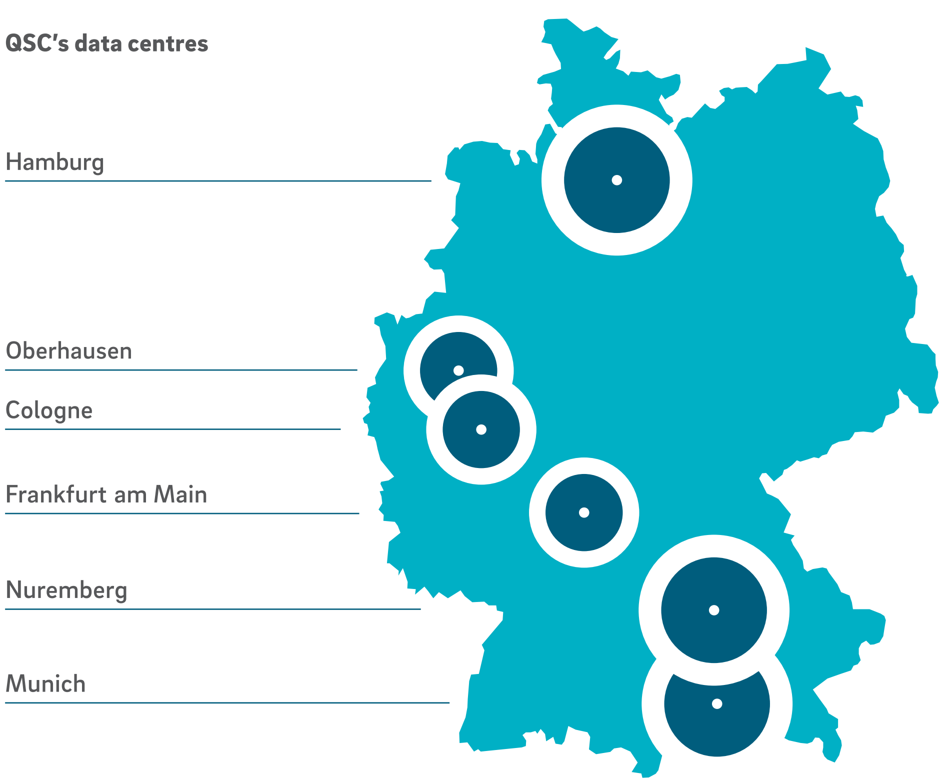
**Consulting – on the way towards digital business processes.** QSC advises companies on optimising their business processes, with a key focus on SAP technologies. As a full-service SAP service provider and long-standing certified partner to SAP, QSC has extensive experience in the fields of basic operations, application management, implementation, user support and maintenance, as well as in managing software licences. QSC also acted early to focus on integrating cloud-based applications, and in particular on the new S/4HANA business suite. QSC supplements its range of consulting services with advice on Microsoft applications, such as SharePoint, Skype for Business and Azure, as well as its own multi-cloud consulting services.

QSC operates networks for third-party providers, incl. network-related services

**Telecommunications (TC) – more than just voice and data services.** QSC has a wealth of experience in operating all types of broadband technology and its own nationwide network infrastructure. Not only that, the Company operates networks on behalf of third-party providers, including all network-related services and a full range of product and customer management services. The Telecommunications segment also includes the colocation business, which provides SMEs with access to a secure and flexible IT infrastructure. The offering comprises traditional products, such as racks and cages, and extends to virtualised solutions offered via virtual data centres. The portfolio is supplemented with management packages and security concepts.

**TÜV and ISO-certified data centres in Germany.** All four segments work with QSC's proprietary ICT infrastructure within Germany. The centrepiece of this infrastructure consists of data centres located within the country's borders. QSC has data centres at six locations with total floor space of around 20,000 square metres. All data centres are governed by German data protection requirements, which are very strict by international standards. Drawing on a high-performance backbone, they act as a geo-redundant network and thus meet the utmost standards in terms of scalability, availability and security.

**QSC's data centres**



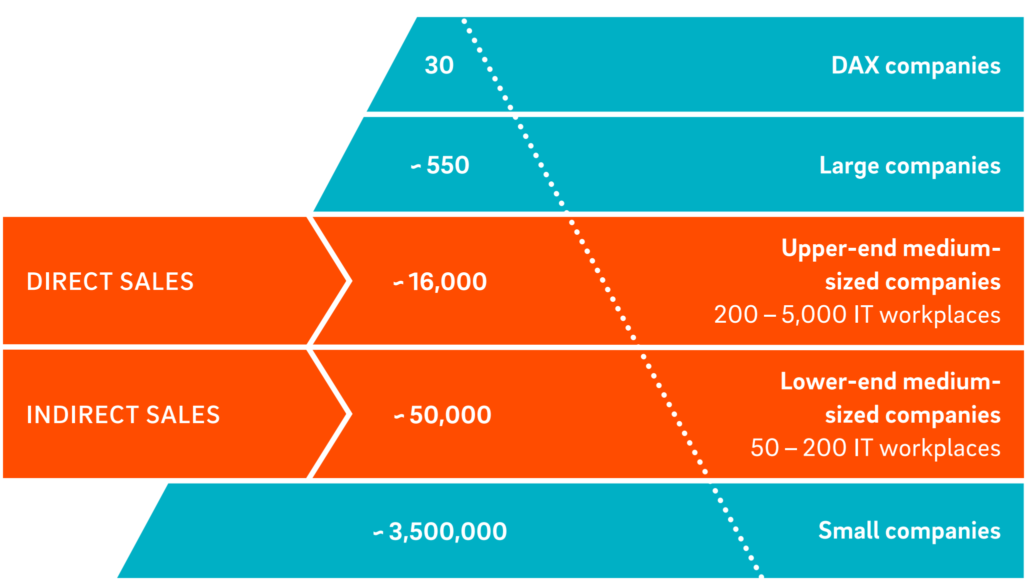
Back in 2006, QSC was the first network operator in Germany to begin expanding its proprietary data network into a next-generation network (NGN). On this basis, the Company can provide IP-based voice transmission and safeguard the convergence of various voice and data transmission technologies with the IP protocol. Moreover, QSC has traditionally operated a nationwide DSL network and one of Germany's largest wireless local loop (WLL) access networks.

## Market and Competitive Position

**Focus on German SME sector.** QSC focuses on medium-sized companies headquartered in Germany. Thanks to its own character as a medium-sized company, its presence throughout Germany and the fact that all of its data centres are located within the country's borders, QSC enjoys a high degree of acceptance among this target group. QSC provides this target group with a range of services that, in terms of its scope, is generally comparable only to that offered by large groups. Numerous awards underline QSC's strong positioning, particularly with regard to cloud technologies. The market research and consulting company ISG, for example, views QSC as one of the market leaders in the provision of cloud-based infrastructure services and designated the Company as a "Rising Star" when it comes to advising SMEs on how to get started in the cloud and supporting them with migration services.

**Numerous awards underline QSC's strong positioning**

**QSC's sales activities**



To optimally address the needs of its SME customers, QSC works with two distribution channels: In Direct Sales, a key account team targets medium-sized companies with more than 200 IT workplaces. Indirect Sales focuses on companies with 50 to 200 workplaces. Particularly in its TC business, QSC works together with numerous sales partners, internet service providers (ISPs) and national and international carriers.

## Strategy

**Focus on needs of medium-sized companies.** QSC's strategy has sustainable value creation as its key objective and is based on the needs of German SME companies. For these companies, digitalisation marks a fundamental change. It gives rise to new business models, accelerates innovation cycles and makes internal processes more efficient. At the same time, customers and employees have ever higher expectations in products and services. They expect to be served ever faster, and that at all times and wherever they are. Gradually introducing digital processes is the only way for companies to satisfy these expectations while themselves remaining efficient and making effective use of their resources. In this respect, IT now has a new role to play. It is no longer a service provider, but a strategic innovation driver.
To be able to manage this change, medium-sized companies in particular require support from experienced service providers. QSC stands out within this market, as its portfolio consistently focuses on the needs of SME customers. The Company advises on, designs, implements and operates all digitalisation processes for and with its customers. The key focus here is often on cloud technologies. After all, the cloud is the IT architecture of the digital age. Only very large companies can operate suitable solutions on an internal basis. SME players place their trust in the performance capacity and technological competence of service providers acting as integrators – and this is precisely where QSC is optimally positioned.

**Cloud is the IT architecture of the digital age**

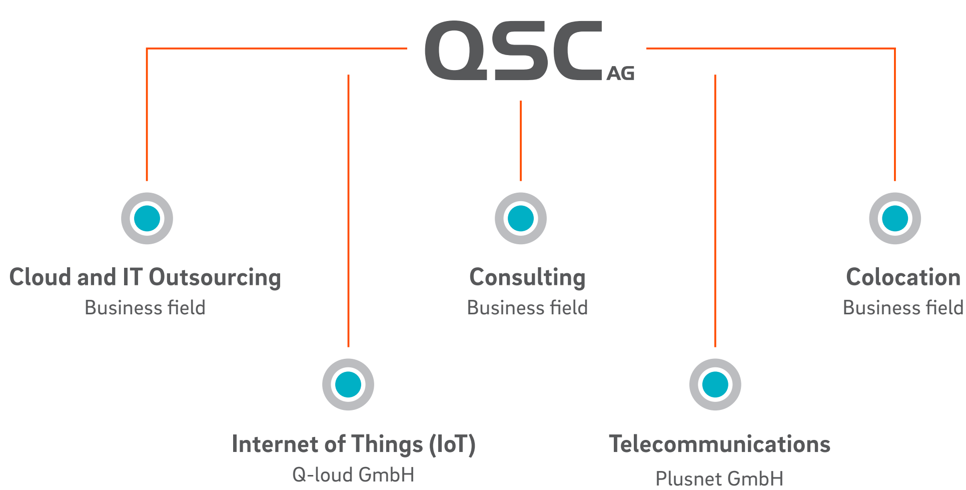
**Clear positioning in high-growth IoT market.** Digitalisation also involves exponential growth in the networking of appliances in the Internet of Things. QSC recognised this trend towards greater networking at an early stage of developments and, with Q-loud, now has an established subsidiary in this high-growth market. Q-loud focuses on so-called smartification, i.e. networking products and machines in the Internet of Things, and covers all stages from project planning to implementation through to the production of suitable sensors and terminals. Q-loud is also an acknowledged specialist when it comes to energy efficiency solutions at industrial and commercial customers. A further key field of activity involves IoT cloud enabling. Here, Q-loud advises and supports customers in scaling production and processes using IoT technology. In the past two years, QSC's subsidiary has already participated in numerous pilot projects in the German SME sector. Transition to regular operations will open up significant potential for scaling up the products and processes.

**Consulting and colocation as gateway to the digital age.** Consulting also plays an important role in digitalising SME companies. After all, key service focuses include integrating cloud-based applications and transforming entire IT systems. Consulting acted early to prepare for SAP's technological advance to the S/4HANA business suite and now helps mainly larger SME players in smartly capturing and using large volumes of data.
A secure and flexible IT infrastructure is an absolutely crucial factor as companies head for the digital age. This is precisely what QSC offers with its colocation services, which are based on the Company's high-performing and secure data centres in Germany. These are supplemented with TC services, in which QSC is one of only few companies in Germany that is able to guarantee maximum end-to-end quality in the field of data transmission. The main focus in the TC business as well is on corporate customers.

**Integrating cloud-based applications as key focus of Consulting**

**Greater agility, speed and flexibility.** Given highly dynamic developments in the relevant markets, QSC is permanently developing its strategy further. By verticalising its organisational structure at the end of 2017, QSC sharpened the profile of its five core competency fields of Cloud and IT Outsourcing, Internet of Things, Consulting, Telecommunications and Colocation. Already in the first year of its existence, this new organisational structure has fostered greater agility – as a result, speed and flexibility have noticeably increased. This will provide a good foundation for the sustainable value growth QSC aims to achieve in the years ahead.

**QSC's vertical organisational structure**



## Research and Development

**Key focus on quality and process-related innovations.** QSC operates in highly dynamic markets. For this reason alone, innovation forms an integral component of the Company's operating business. The key focus here is on quality and process-related innovations which, for example, ensure the smooth migration of customers' complex IT and TC systems to QSC's service portfolio and enable these to be continually optimised. This kind of innovation arises in dialogue with customers, an exchange which creates momentum for new products and services. This being so, QSC views research and development (R&D) as a cross-divisional activity and does not allocate any separate resources. For the same reason, the Company does not report the number of employees involved in R&D.

The R&D budget also only provides limited information concerning innovation processes. Here, QSC chiefly recognises work performed on further developing its cloud and IoT portfolio. Total research and development expenses amounted to € 7.9 million in 2018, as against € 4.7 million in the previous year. Of this sum, an amount of € 2.0 million was capitalised (2017: € 0.2 million).

**Smart linking of IoT and SAP expertise.** In developing new products and services, QSC is increasingly pooling expertise from its various business fields. One example here is the QSC Energy Management Cockpit presented in September 2018 – Germany's first qualified solution for the SAP Leonardo cloud and development platform. This cockpit provides companies with visibility on their energy consumption across various locations and in real time. To achieve this, QSC's IoT subsidiary Q-loud equips traditional electricity and gas meters with its "EnergyCams". These cameras scan the meter readings, digitise them and transmit the data via an IoT module to a cloud platform. The QSC Energy Management Cockpit, which is based on SAP, processes the data and presents it in an easily understood format. The data is processed in the SAP HANA in-memory database or, as an additional option, in other cloud environments.

**QSC builds on "open innovation process" and acts early to involve customers**

For this development, QSC relied on the "open innovation process", which enabled it to account for the customer's wishes during the design stage and development process already. These kinds of agile working methods are increasingly characteristic of the Company's innovation activities.

## Organisational Structure

**Nationwide presence in German market.** QSC AG has its legal domicile in Cologne and a second major location in Hamburg. These two sites are supplemented by ten sales offices located across Germany. QSC has four material direct and indirect participating interests:

- On 12 July 2018, the Annual General Meeting approved the spin-off of the TC business to a standalone company, QSC's wholly-owned subsidiary Plusnet GmbH. The corresponding entry was made in the Commercial Register on 31 August 2018.
- Plusnet owns 100% of the shares in Ventelo GmbH, which provides TC services to existing customers.
- Ventelo in turn owns 100% of the shares in the network company Plusnet Infrastruktur GmbH & Co. KG.
- At Q-loud GmbH, QSC has pooled all of its IoT activities since November 2016 already.

A complete overview of the scope of consolidation as of 31 December 2018 can be found in Note 34 of the Consolidated Financial Statements.

SEE P. 146 CONSOLIDATED FINANCIAL STATEMENTS

## Corporate Management

**Management by key financial performance indicators.** QSC is managed on the level of its segments, which are based on a system of profit, cost and service centres. The following key financial performance indicators are referred to on group level: revenues, EBITDA and free cash flow. No reference is made to non-financial performance indicators for Company management purposes.

**QSC works with a system of profit, cost and service centres**

**QSC's key financial performance indicators**

EBITDA is defined as earnings before interest, taxes, amortisation of deferred non-cash share-based compensation, impairment losses on customer-related inventories and depreciation/amortisation of property, plant and equipment and intangible assets. The EBITDA margin presents EBITDA as a percentage of revenues. The free cash flow presents the change in net liquidity/debt from operating activities.
The key figure referred to by management when managing the segments is the segment contribution. This is defined as EBITDA before general administration costs and the other operating result. The segment margin presents the segment contribution as a percentage of the respective revenues.

PP. 82 FF.
RISK MANAGEMENT SYSTEM

**Monthly reports as core management instrument.** The monthly reports contain all relevant key figures and budget/actual comparisons. They serve as a key basis of discussion at the fortnightly meetings of the Management Board, as well as for the monthly reports to the Supervisory Board. Moreover, the latest budget/actual comparisons are used as a basis for regularly updating the rolling planning. This serves as an early warning system for potential variances, thus enabling corrective measures to be taken at an early stage. One integral component of reporting is the risk management system, which is described in this Group Management Report from Page 82 onwards. This ensures that any changes in opportunities and risks are directly factored into the management system.

# CORPORATE GOVERNANCE

## Corporate Governance Report (unaudited*)

**Transparent management and supervision.** Sustainable business success requires high-quality corporate governance. QSC's Management and Supervisory Boards therefore attach very great importance to ensuring that the Company is transparently managed and supervised. In this, they refer to the German Corporate Governance Code ("Code"), whose requirements they consistently implement apart from a small number of substantiated exceptions. In the following section the Management Board reports, also on behalf of the Supervisory Board, on corporate governance pursuant to Item 3.10 of the Code. This report integrates the compensation report required by law and, in a separate section, the corporate governance declaration required by § 289f and § 315d of the German Corporate Code (HGB).

**Sustainable success requires high-quality corporate governance**

### MANAGEMENT AND SUPERVISION (unaudited*)

**QSC has a dual management structure.** QSC AG is a publicly listed stock corporation under German law and has a dual management structure. The Management Board manages the Company under its own responsibility while the Supervisory Board appoints, supervises and advises the Management Board. Members of both boards are bound solely by the Company's interests. No conflicts of interest arose in the past financial year.
The Management Board ensures that legal requirements and internal company guidelines are complied with throughout the Group. Further information about the compliance management system can be found on Pages 60 to 63 of this Annual Report. Since December 2017, an electronic whistleblowing system has enabled employees and third parties to provide tip-offs of any violations of the law at the company in a protected manner. Furthermore, the Management Board is also responsible for ensuring that adequate risk management and controlling structures are in place. Further information about these can be found in the Risk Report on Pages 82 to 87.

SEE PP. 60 – 63
COMPLIANCE MANAGEMENT SYSTEM

SEE PP. 82 – 87 RISK REPORT

**Two-member Management Board adopts resolutions on unanimous basis.** The Rules of Procedure issued by the Supervisory Board stipulate that Management Board resolutions require a simple majority of the votes cast, with the CEO having the casting vote in the event of a parity. This does not apply when the Management Board has only two members; in this case, unanimity is required. All resolutions relating to measures and transactions that are of major significance to the Company or that involve substantial financial risk are adopted by the full Management Board. A business allocation plan governs the areas of responsibility of Management Board members. Each Management Board member manages those areas under his or her own responsibility within the framework of Management Board resolutions.

* The sections marked with the word "unaudited" have not been reviewed by the auditor.

In the 2018 financial year, the Management Board comprised two members: Jürgen Hermann (CEO) and Stefan A. Baustert (CFO). In line with new legal requirements, at the beginning of 2018 the Supervisory Board adopted a diversity concept for the Management Board. This lays down the criteria to be referred to when selecting candidates for future Management Board positions. These criteria focus on specialist qualifications for the position to be occupied, management qualities, achievements and skills acquired to date and knowledge of the Company. Furthermore, in the search for suitably qualified candidates for the Management Board due account should also be taken in future of diversity considerations. The extent to which the Management Board activities benefit from different, mutually complementary specialist profiles, professional and life experience and suitable representation of both genders should be appraised. The full version of the diversity concept for the Management Board can be found at www.qsc.de/en/diversity.

WWW.QSC.DE/EN/DIVERSITY

**Supervisory Board promptly informed by Management Board.** The Management Board informs the Supervisory Board without delay and comprehensively of issues important to the Company with regard to strategy, planning, business development, and to its risk situation, risk management and compliance. The Rules of Procedure for the Management Board require Supervisory Board approval to be obtained prior to the conclusion of any major business transactions, such as the adoption of annual planning and major investments, acquisitions and financing measures. These Supervisory Board decisions are discussed in detail in the committees and by the full Supervisory Board.

**AGM confirms existing members of Supervisory Board in office**

**Six-member Supervisory Board performs supervisory duties.** Pursuant to the Articles of Association, QSC's Supervisory Board comprises six members. Consistent with the requirements of the German Codetermination Act (MitbestG), two thirds of Supervisory Board members are elected by shareholders and one third by employees. In July 2018, the Annual General Meeting (AGM) confirmed the four existing shareholder representatives on the Supervisory Board with large majorities. The employees had already selected their representatives in advance. The term in office of this Supervisory Board expires upon the conclusion of the Annual General Meeting approving the actions of the Supervisory Board for the 2022 financial year.

**Supervisory Board committees**

| Nomination Committee | HR Committee | Audit Committee | Strategy Committee |
|---|---|---|---|
| Gerd Eickers (Chair) | Dr. Bernd Schlobohm (Chair) | Ina Schlie (Chair) | Dr. Bernd Schlobohm (Chair) |
| Dr. Frank Zurlino | Gerd Eickers | Dr. Bernd Schlobohm | Dr. Frank Zurlino |
| | Cora Hödl | Dr. Frank Zurlino | |

Unless otherwise stipulated by law or the Articles of Association, the Supervisory Board and its committees adopt resolutions by a simple majority vote. Four committees – the Nomination, Human Resources, Audit and Strategy Committees – were in place throughout the past financial year. All committees regularly report to the full Supervisory Board and prepare draft versions of its resolutions where appropriate. Detailed information about the activities of the Supervisory Board and its committees can be found in the Supervisory Board and its committees can be found in the Supervisory Board Report on Pages 14 to 20.

QSC concludes a D&O insurance for all members of the Supervisory Board. As called for by the Code, this includes a deductible of 10% of total damages. QSC nevertheless caps the liability per year at 100% of the fixed annual compensation paid to Supervisory Board members as it does not deem it appropriate for the deductible to exceed this amount.

SEE PP. 14 – 20
SUPERVISORY BOARD REPORT

**Supervisory Board meets all targets for its composition.** In May 2017, the Supervisory Board adopted specific targets for its composition and a competence profile. The complete document is available at www.qsc.de/en/diversity. Accordingly, the Supervisory Board should as a whole have the specific knowledge, skills and experience necessary to perform its duties correctly. As well as a detailed competence profile, the document also lays down principles governing the independence of Supervisory Board members, the appropriate participation of women, the membership of former Management Board members and an age limit. The targets are consistent with the recommendations made in Item 5.4.1 of the Code – with two exceptions: There is no regular limit set on the length of membership, as the Supervisory Board believes that it would not be in the Company's best interests to set an advance limit on the length of individual board membership. To enhance the legal security of future elections to the Supervisory Board, the Management and Supervisory Boards also decided to declare a divergence from the recommendation made in the Code that Supervisory Board election proposals should disclose the personal and business relations of the respective candidates with the Company, its executive bodies and with any shareholders holding material interests in the Company. In QSC's opinion, this recommendation does not provide sufficient clarity as to which specific relations should actually be disclosed or as to the degree of detail required for such disclosures.

WWW.QSC.DE/EN/DIVERSITY

The Supervisory Board met these self-imposed targets in the past financial year, and that both in its composition through to the Annual General Meeting in July 2018 and subsequently. With Ina Schlie and Dr. Frank Zurlino, the Supervisory Board had and continues to have two independent members. As the long-standing Director of the Group Tax Department at SAP, Ina Schlie also has the expert knowledge called for in the fields of accounting and auditing. Her membership also ensures that the self-imposed minimum share of women in the Supervisory Board, namely 16.6%, is met. With Dr. Bernd Schlobohm and Gerd Eickers, the Supervisory Board includes a maximum of two former members of the Management Board. All candidates at the election in summer 2018 were aged below 75.

The Supervisory Board ascertained from the respective candidates in advance of the election that they would be have the time required for the role. As provided for by the Code, prior to the election the Supervisory Board also published the CVs of the candidates, thus providing information about their relevant specialist knowledge, skills and experience. These CVs are available for viewing on the Company's website (www.qsc.de/en/supervisory-board) and are updated each year.

WWW.QSC.DE/EN/
SUPERVISORY-BOARD

## SHAREHOLDERS AND ANNUAL GENERAL MEETING (unaudited*)

**Extensive, transparent communications with the capital market.** The Company uses its own website to report promptly on all developments relevant to the capital market. Interested parties will find ad-hoc and press releases on the site, as well as the Company's quarterly and annual reports, latest presentations and a financial calendar. The website is also where QSC makes available all of the documents relevant to its Annual General Meeting.
One aspect of transparent communications involves providing prompt information about any purchase or sale of QSC shares by members of the Management and Supervisory Boards or parties closely related to such. An overview of the transactions in the 2018 financial year can be found at www.qsc.de/en/directors-dealings.

WWW.QSC.DE/EN/
DIRECTORS-DEALINGS

**Ongoing dialogue with shareholders.** The most important event for the Company's dialogue with its shareholders is the Annual General Meeting. Just over 32% of the share capital was present at the Annual General Meeting for the 2017 financial year held in Cologne on 12 July last year. Shareholders not present were able to have their voting rights exercised by a proxy holder of their choice or by a voting proxy bound to vote in line with their instructions. The shareholders approved all agenda items with large majorities. Like in previous years, the Chair of the Meeting ensured that the meeting progressed efficiently. It was decided not to broadcast the event on the internet, as the associated costs and legal uncertainties continued to outweigh the potential benefit for absent shareholders.
In the course of the year, QSC upholds its dialogue with shareholders above all by way of meetings held with investors and analysts at roadshows and in one-to-one talks, some of which at capital market conferences organised by banks. Conference calls held on the days the quarterly results are published also ensure that all target groups receive up-to-date information. QSC makes the respective presentations, as well as recordings of the comments made by members of the Management Board, available to all shareholders. Further information about the Company's investor relations activities can be found in "QSC Share Performance" on Pages 21 to 24 of this Annual Report.

SEE PP. 21–24
QSC SHARE PERFORMANCE

## Corporate Governance Declaration (unaudited*)

**Information pursuant to § 289f and § 315d of the German Commercial Code (HGB).** The corporate governance declaration is a constituent component of the management report. Pursuant to § 317 (2) Sentence 6 of the German Commercial Code (HGB), the review performed by the auditor is limited to the presentation of the disclosures made below and does not address their contents.

**Declaration pursuant to § 161 of the German Stock Corporation Act (AktG).** The Management and Supervisory Boards published the following Declaration of Compliance on 22 November 2018.

* The sections marked with the word "unaudited" have not been reviewed by the auditor.

**Declaration by the Management and Supervisory Boards of QSC AG pursuant to § 161 of the German Stock Corporation Act (AktG) regarding the Company's compliance with the German Corporate Governance Code ("Deutscher Corporate Governance Kodex") in the version dated 7 February 2017**

Since its formation, QSC AG ("QSC") has been committed to good corporate governance and has viewed transparency and value-driven management as essential. Consequently, the Company implements nearly all recommendations set forth in the German Corporate Governance Code and adheres to them in its daily work. Since submitting its previous Declaration of Compliance, the Company has complied and continues to comply with the recommendations of the Government Commission "German Corporate Governance Code" in the version dated 7 February 2017, with the following exceptions:

– **No agreement regarding a deductible in the D&O insurance for members of the Supervisory Board (§ 93, paragraph 2 of the German Stock Corporation Act ["AktG"]) (Item 3.8, Paragraphs 2 and 3 of the Code).** QSC complies with the recommendation of the German Corporate Governance Code in that the D&O insurance policy for Supervisory Board members includes a deductible of 10% of the respective damages per damage event. However, and contrary to the recommendation, the liability per year is capped at 100% of the fixed annual compensation of the Supervisory Board members, since QSC does not deem it appropriate for the deductible to exceed their annual compensation.

– **No cap on individual variable compensation components or on the overall compensation of one Management Board member and consequently no presentation of the maximum achievable compensation in the compensation report (Item 4.2.3, Paragraph 2, Sentence 6 and Item 4.2.5, Paragraph 3 [first bullet point], Paragraph 4 of the Code).** Only one Management Board member still holds convertible bonds issued within the 2006 Stock Option Plan as one variable component of his Management Board compensation. These were allocated before the recommendation took effect. The current Management Board contract provides for a cap in the event of unforeseen developments; it does not, however, set any maximum limit on gains from exercising conversion rights in connection with the 2006 Stock Option Plan and thus on the overall compensation of the Management Board member. In view of this, QSC will also be unable to state any maximum amounts that may be called for in the model tables in the compensation report. QSC otherwise fully complies with the recommendations in respect of existing Management Board compensation and will also comply with the recommendations when determining any future Management Board compensation.

– **No regular limit set for length of Supervisory Board membership (Item 5.4.1, Paragraph 2, Sentence 2 of the Code).** The Supervisory Board of QSC has compiled a competence profile for the board as a whole and set specific targets for its composition that are consistent with the recommendations made in Item 5.4.1 with the exception of the requirement to set a regular limit for the length of Supervisory Board membership. The Supervisory Board believes that it would not be in the Company's best interests to set an advance limit on the length of individual board membership. It is basically desirable that the Supervisory Board should change its composition at certain intervals; on the other hand, the Company should also be able to draw on the expertise of experienced Supervisory Board members.

– **No disclosure of personal and business relations of each individual candidate with the Company, its executive bodies and with any shareholders holding material interests in company in election proposals to Annual General Meeting (Item 5.4.1, Paragraphs 6 to 8 of the Code).** In QSC's opinion, the recommendation of the German Corporate Governance Code does not specify clearly enough which relationships of a candidate must be disclosed and the extent to which such disclosures are required to be made for proposed elections at the Annual General Meeting in order to comply with the recommendation. In the interests of legal certainty with respect to future elections to the Supervisory Board, the Management Board and Supervisory Board have decided to declare a divergence from the recommendation. QSC is of the opinion that the existing disclosure requirements contained in § 124, paragraph 3 sentence 4 and in § 125, paragraph 1 sentence 5 of the German Stock Corporation Act ("AktG") are sufficient to meet the informational needs of the shareholders and will, at an appropriate date in the future, investigate and decide – voluntarily and without tying itself to the Code's recommendation – whether to disclose additional information about candidates proposed for election at the Annual General Meeting.

Cologne, 22 November 2018

On behalf of the Management Board
Jürgen Hermann

On behalf of the Supervisory Board
Dr. Bernd Schlobohm

**Relevant corporate governance practices.** QSC views corporate governance as providing a framework for transparently managing and supervising the entire Company. Not least for that reason, its internal policies are consistent with the Code. Moreover, QSC's corporate management is based on a system of shared values. QSC's Compliance Guidelines summarise the main contents of this system in the Code of Conduct. These are binding for the Management Board and for all employees and are also expected to shape business dealings with third parties. The Code of Conduct has been published at www.qsc.de/en/code-of-conduct.

WWW.QSC.DE/EN/
CODE-OF-CONDUCT

Compliance naturally requires the ongoing attention of the Company's executive bodies. The Management and Supervisory Boards therefore address this topic regularly, as does the Supervisory Board Audit Committee. In doing so, they draw on information including the quarterly risk reports, in-house controlling and internal audit reports. The associated discussions generate major impetus for enhancing the compliance management system on an ongoing basis. Further information about compliance at QSC can be found in the Non-Financial Declaration on Pages 54 to 69.

SEE PP. 54 – 69
NON-FINANCIAL DECLARATION

**Description of the mode of operation of the Management and Supervisory Boards.** The mode of operation of the Management Board is described in the Corporate Governance Report on Pages 36 and 37. Information about the Supervisory Board can be found on Pages 37 and 38 and in the Supervisory Board Report on Pages 14 to 20.

SEE PP. 36 – 38
CORPORATE GOVERNANCE REPORT

SEE PP. 14 – 20
SUPERVISORY BOARD REPORT

**Diversity pursuant to § 76 (4) and § 111 (5) of the German Stock Corporation Act (AktG).** The Supervisory Board has set itself the target that at least 16.6% of its members should be women. The inclusion of women is basically viewed as a responsibility shared by shareholder and employee representatives alike. As the Supervisory Board does not have any influence over the election of employee representatives, the shareholder representatives have assumed the task of meeting this target. With Ina Schlie, the Supervisory Board included one female shareholder representative, also in the period since the election of new members in July 2018. She is joined by one female employee representative. With a female quota of 33%, the newly elected Supervisory Board also meets its self-imposed targets and legal requirements.
For the Management Board, the Company has set itself a target of 0% female members. Given QSC's great focus on IT and technology, in the 2017 financial year the Supervisory Board set this target for the period until 30 June 2022. In the past financial year, the Management Board comprised two men. For the top two management tiers, the Company has set itself a target of 15% female managers. At the end of 2018, women made up 12% of both the first and second management tiers.

**33%**

**share of women in Supervisory Board**

## Compensation Report

**Transparent presentation of compensation paid to Management and Supervisory Boards.** One aspect of good corporate governance involves transparently presenting the total compensation paid to members of the Management and Supervisory Boards. The compensation system for members of the Management Board was most recently approved by the Annual General Meeting on 27 May 2015. According to this system, the Supervisory Board determines the total compensation payable to individual members of the Management Board. In assessing the appropriateness of this compensation, the Supervisory Board is guided by the tasks of the individual Management Board member, his or her personal performance and the Company's economic situation and its sustainable development. It also takes due account of the appropriateness of the compensation by reference to peer group companies and compensation structures otherwise applicable within the company and at other companies. Total compensation is structured in such a way as to be competitive in the market for highly qualified executives.

**High share of annual target compensation for Management Board members is performance-related.** The compensation system for QSC's Management Board consists of fixed and variable compensation components, pension benefits and other fringe benefits.
The annual non-performance-related fixed compensation should make up a maximum of 50% of total annual target compensation (comprising fixed and variable compensation based on 100% target achievement). It accounts for the performance of the respective member of the Management Board and the function and responsibilities assigned to him or her. Fixed compensation is paid by transfer and in 12 equal monthly instalments at the end of each calendar month. Management Board members do not receive any separate compensation for assuming further group-internal positions.
Furthermore, Management Board members receive variable compensation (bonus). The amount of this bonus is based on the achievement of the annual targets (short-term incentives) and multiyear targets (long-term incentives) to be agreed in separate target agreements. These targets may be based on Company-related key figures and/or individual considerations. For Company-related key figures, they may also include more ambitious minimum targets than those communicated in external outlooks.

**Assessment period of three years for multiyear targets**

The assessment period for multiyear targets covers three years. Multiyear targets are agreed at the beginning of the assessment period and must be met by the end of such period. When defining target achievement, the Supervisory Board may also agree further interim targets to be met over the individual financial years in the assessment period and/or further conditions.
Variable compensation is payable in cash and should account for at least 50% of the total annual target compensation (based on 100% target achievement). Target achievement is basically determined following the adoption of the consolidated financial statements relevant to the targets defined in the target agreement. Any resultant bonus is paid out at the end of the month in which the Annual General Meeting is held following expiry of the financial year, to the extent that it relates to annual targets, and at the end of the month in which the Annual General Meeting is held following expiry of the assessment period, to the extent that multiyear targets are involved.
Furthermore, the Company also grants pension benefits to its Management Board members. These involve defined contribution commitments for benefits provided by insurance companies and pension funds and/or commitments to pay a fixed amount to enable the member to secure his or her own suitable provision for retirement and for surviving dependants. The other fringe benefits granted to Management Board members mainly relate to the provision of a company car, payment of a car allowance and insurance provision customary to the market.

**Variable compensation dependent on achievement of minimum targets.** The Supervisory Board agrees lower and upper limits for the achievement of each individual annual and multiyear target. Failure to meet lower limits or any condition governing an annual target and/or multiyear target results in the complete loss of the variable compensation attributable to the respective target. In the case of the multiyear target, the variable compensation attributable to the respective target may be lost for the entire assessment period. Non-achievement of an interim target results in the partial or complete loss of the compensation dependent on achievement of such target. The upper limit serves to cap variable compensation in the event of exceptional developments at a maximum of 1.5 times the target compensation attributable to variable compensation and attainable upon 100% target achievement.

In concluding target agreements, the Supervisory Board ensures that the share of variable target compensation due to achievement of the multiyear targets basically reaches a minimum of the share attributable to achievement of the annual targets. The share of variable compensation due to annual targets may nevertheless be weighted more significantly to the extent that the compensation structure remains focused on the Company's sustainable development and on providing a long-term performance incentive by including other elements (such as additional bonuses by way of shares and stock options).

To recognise the achievement of multiyear targets and promote the Company's sustainable development, the Supervisory Board may commit to paying Management Board members an appropriate additional bonus in the form of shares or stock options in QSC and, if so, agree suitable waiting, holding and exercise periods. This may further increase the share of total variable compensation attributable to variable compensation of a long-term incentive nature, as well as the share of total target compensation attributable to variable compensation. Finally, to acknowledge exceptional performance, the Supervisory Board may – at its own discretion – grant Management Board members a suitable additional bonus in cash or in the form of shares or stock options in the Company. Holding and exercise periods may be agreed in this regard as well.

**Management Board compensation for 2018.** Total Management Board compensation for the 2018 financial year came to € 1,132k, as against € 2,412k in the 2017 financial year. This substantial reduction in total compensation was mainly due to the departure of two Management Board members at the end of the 2017 financial year, with only two members still in office in the 2018 financial year. Furthermore, the 2017 financial year's total compensation figure also included the variable compensation paid for the multiyear targets for the period from 2015 to 2017. Individualised Management Board compensation is presented in the table on Pages 47 and 48. When extending the employment contract with the Management Board member Stefan A. Baustert, the Supervisory Board, acting upon a recommendation made by its Human Resources Committee, decided to diverge on an exceptional basis from the compensation system approved by the Annual General Meeting. The fixed compensation payable to Stefan A. Baustert was increased as of 1 January 2018 and, for the term of the employment contract, will in future make up 54.5% of his annual target compensation (based on 100% target achievement) and thus exceed the 50% mark.

SEE PP. 47–48
COMPENSATION TABLE

This exemption was approved, as the increase in fixed compensation represented a key factor in Stefan A. Baustert agreeing to the extension of his employment contract. The Supervisory Board and its Human Resources Committee believe that it is in the Company's interests to extend the Management Board activity of Stefan A. Baustert.
In the target agreements entered into for the 2018 financial year, a congruent annual target and two separate, equally weighted multiyear targets were agreed for all Management Board members in office in the 2018 financial year.
The 2018 annual target, which was linked to the Group's free cash flow in the 2018 financial year, was reached in full.
The assessment period for multiyear targets covers the financial years from 2018 to 2020.

**Multiyear targets for EBITDA margin and Cloud revenues**

The multiyear targets are linked to the consolidated EBITDA margin at the end of the assessment period in 2020 and to the revenues generated in the Cloud segment in the 2020 financial year. No information indicating that the targets agreed for the 2020 financial year cannot be met in full was available at the end of 2018. The share of variable compensation attributable to the multiyear targets will only be accounted for as a component of overall compensation after the expiry of the assessment period and if the agreed multiyear targets have been met.
No loans were granted to Management Board members.

**Benefits in the event of premature termination.** All Management Board members have been promised settlements should their Management Board activities be prematurely terminated due to effective revocation of their appointment by the Company within the first two years covered by their employment contracts. These settlements amount to € 600k, as in the previous year, in the case of the CEO, Jürgen Hermann, and to € 550k for the Management Board member Stefan A. Baustert (2017: € 500k). In the final year of their employment contracts, this settlement reduces by one twelfth per month in which the employment relationship still pertained in the final year of the contract. There is no entitlement to any settlement payment should the employment relationship be terminated without notice due to compelling reason (§ 626 BGB) or in the event of the employment relationship being terminated due to the Management Board member legitimately resigning from his position. Should Management Board activity be terminated by mutual agreement and without compelling reason, the total value of the benefits committed by the Company in any agreement of this kind should not exceed the respective amounts of € 600k and € 550k.

**Disclosures on retired Management Board members.** Total compensation for former Management Board members came to € 4k in the 2018 financial year (2017: € 942k). This involved a retrospectively paid insurance premium.
Dr. Bernd Schlobohm, a former Management Board member, was granted a direct pension commitment for a retirement, occupational disability and widow's pension in 1997. At the balance sheet date, the obligation amounted to € 1,839k prior to the offsetting of reinsurance claims of € 1,695k. The actuarial present value of provisions for vested pension claims for other former Management Board members amounted to € 80k.

**Shares and conversion rights held by Management Board members.** The following table presents individualised information about the number of shares and convertible bonds held by members of the Management Board:

| | Shares | | Convertible bonds | |
|---|---|---|---|---|
| | 31 Dec. 2018 | 31 Dec. 2017 | 31 Dec. 2018 | 31 Dec. 2017 |
| Jürgen Hermann | 600,000 | 400,000 | 350,000 | 350,000 |
| Stefan A. Baustert | 40,000 | 40,000 | 200,000 | 200,000 |
| Udo Faulhaber (until 31 December 2017) | - | -[1] | - | 150,000[1] |
| Felix Höger (until 31 December 2017) | - | -[1] | - | 150,000[1] |

[1] Holdings at the time of retirement from the Management Board.

Jürgen Hermann purchased shares in the Company via the stock exchange in the 2018 calendar year (please also see the corresponding directors' dealings notifications made pursuant to Article 19 of the European Market Abuse Directive on QSC's website at www.qsc.de/en/directors-dealings).

WWW.QSC.DE/EN/
DIRECTORS-DEALINGS

## Benefits granted

€ 000s

| | Jürgen Hermann, Chief Executive Officer, since 30 May 2013 | | | | Stefan A. Baustert, Member of the Management Board, since 1 January 2015 | | | |
|---|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2018 (min.) | 2018 (max.) | 2017 | 2018 | 2018 (min.) | 2018 (max.) |
| **Benefits granted** | | | | | | | | |
| Fixed compensation | 300 | 300 | 300 | 300 | 250 | 300 | 300 | 300 |
| Fringe benefits | 33 | 32 | 32 | 32 | 35 | 36 | 35 | 35 |
| **Total** | **333** | **332** | **332** | **332** | **285** | **336** | **335** | **335** |
| Special bonus[1] | 20 | - | - | - | 20 | - | - | - |
| One-year variable compensation | 150 | 150 | 0 | 225 | 125 | 125 | 0 | 187 |
| Multiyear variable compensation | | | | | | | | |
| Long-term incentive (2015 – 2017)[2] | 150 | - | - | - | 125 | - | - | - |
| Long-term incentive (2018 – 2020)[3] | - | 150 | 0 | 225 | - | 125 | 0 | 187 |
| **Total compensation pursuant to DCGK** | **653** | **632** | **332** | **782** | **555** | **586** | **335** | **709** |
| **Reconciliation with total compensation** | | | | | | | | |
| **pursuant to § 314 (1) No. 6a HGB in conjunction with DRS 17** | | | | | | | | |
| Less annual variable target compensation granted | (150) | (150) | | | (125) | (125) | | |
| Less long-term incentive (2015 – 2017)[4] | (150) | - | | | (125) | - | | |
| Less long-term incentive (2018 – 2020)[4] | - | (150) | | | - | (125) | | |
| Plus annual variable actual compensation paid | 189 | 168 | | | 208 | 140 | | |
| Plus long-term incentive paid (2015 – 2017)[4] | 146 | 85 | | | 122 | 71 | | |
| **Total compensation** | **688** | **585** | | | **635** | **547** | | |
| Total expenses for share-based compensation recognised in reporting period | 38 | 22 | | | 39 | 39 | | |

## Benefits paid

€ 000s

| | Jürgen Hermann, Chief Executive Officer, since 30 May 2013 | | Stefan A. Baustert, Member of the Management Board, since 1 January 2015 | |
|---|---|---|---|---|
| | 2017 | 2018 | 2017 | 2018 |
| **Benefits paid** | | | | |
| Fixed compensation | 300 | 300 | 250 | 300 |
| Fringe benefits | 33 | 32 | 35 | 36 |
| **Total** | **333** | **332** | **285** | **336** |
| Special bonus[1] | 20 | - | 70 | - |
| One-year variable compensation | 189 | 168 | 158 | 140 |
| Multiyear variable compensation | | | | |
| Long-term incentive (2015 – 2017)[2] | 146 | 85 | 122 | 71 |
| **Total compensation pursuant to DCGK** | **688** | **585** | **635** | **547** |

**> Please see Page 49 for footnotes.**

## Benefits granted

€ 000s

| | Udo Faulhaber<br>Member of the Management Board<br>until 31 December 2017 | | | | Felix Höger<br>Member of the Management Board<br>until 31 December 2017 | | | |
|---|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2018 (min.) | 2018 (max.) | 2017 | 2018 | 2018 (min.) | 2018 (max.) |
| **Benefits granted** | | | | | | | | |
| Fixed compensation | 250 | - | - | - | 300 | - | - | - |
| Fringe benefits | 31 | - | - | - | 42 | - | - | - |
| **Total** | **281** | **-** | **-** | **-** | **342** | **-** | **-** | **-** |
| Special bonus[1] | 20 | - | - | - | 20 | - | - | - |
| One-year variable compensation | 125 | - | - | - | 150 | - | - | - |
| Multiyear variable compensation | | | | | | | | |
| Long-term incentive (2015 – 2017)[2] | 125 | - | - | - | 150 | - | - | - |
| Long-term incentive (2018 – 2020)[3] | - | - | - | - | - | - | - | - |
| **Total compensation pursuant to DCGK** | **551** | **-** | **-** | **-** | **662** | **-** | **-** | **-** |
| **Reconciliation with total compensation** | | | | | | | | |
| **pursuant to § 314 (1) No. 6a HGB in conjunction with DRS 17** | | | | | | | | |
| Less annual variable target compensation granted | (125) | - | | | (150) | - | | |
| Less long-term incentive (2015 – 2017)[4] | (125) | - | | | (150) | - | | |
| Less long-term incentive (2018 – 2020)[4] | - | - | | | - | - | | |
| Plus annual variable actual compensation paid | 125 | - | | | 150 | - | | |
| Plus long-term incentive paid (2015 – 2017)[4] | 76 | - | | | 75 | - | | |
| **Total compensation** | **502** | **-** | | | **587** | **-** | | |
| Total expenses for share-based compensation | | | | | | | | |
| recognised in reporting period | 59 | - | | | 63 | - | | |

## Benefits paid

€ 000s

| | Udo Faulhaber<br>Member of the Management Board<br>until 31 December 2017 | | Felix Höger<br>Member of the Management Board<br>until 31 December 2017 | |
|---|---|---|---|---|
| | 2017 | 2018 | 2017 | 2018 |
| **Benefits paid** | | | | |
| Fixed compensation | 250 | - | 300 | - |
| Fringe benefits | 31 | - | 42 | - |
| **Total** | **281** | **-** | **342** | **-** |
| Special bonus[1] | 20 | - | 20 | - |
| One-year variable compensation | 125 | - | 150 | - |
| Multiyear variable compensation | | | | |
| Long-term incentive (2015 – 2017)[2] | 76 | - | 75 | - |
| **Total compensation pursuant to DCGK** | **502** | **-** | **587** | **-** |

**< Footnotes from Pages 47 /48**

[1] To acknowledge exceptional performance, the employment contracts concluded with Management Board members allow for the possibility of the Supervisory Board granting appropriate cash bonuses to individual Management Board members over and above the respectively agreed fixed and variable compensation.

[2] The variable compensation for the long-term incentive (2015 – 2017) was agreed on the basis of two separate, equally weighted multiyear targets. The assessment period for the multiyear targets covered the financial years from 2015 to 2017. The multiyear targets were linked to consolidated EBITDA for the 2017 financial year and to the revenues generated in the new high-growth Cloud segment in the 2017 financial year. While the contractually agreed lower threshold was met for the consolidated EBITDA sub-target, the lower threshold for the Cloud revenue sub-target was not met, as a result of which all variable compensation attributable to the latter sub-target was forfeited.
The target agreement for the long-term incentive (2015 – 2017) stipulates that, should any significant one-off items arise in the financial years within the assessment period that are of material significance when determining the degree of target agreement, the members of the Supervisory and Management Boards will agree whether these items should be neutralised for the purpose of determining the degree of target achievement. At the recommendation of the Human Resources committee, in March 2018 the Supervisory Board decided to neutralise material one-off charges affecting the calculation of consolidated EBITDA for 2017. This increased the degree of target achievement and the resultant level of variable compensation for the consolidated EBITDA sub-target.

[3] The variable compensation for the long-term incentive (2018 – 2020) was agreed on the basis of two separate, equally weighted multiyear targets. The assessment period for the multiyear targets covers the financial years from 2018 to 2020. The multiyear targets are linked to the consolidated EBITDA margin for the 2020 financial year and the revenues generated in the Cloud segment in the 2020 financial year. No information indicating that the targets agreed for the 2020 financial year cannot be met in full was available at the end of 2018.

[4] Consistent with § 314 (1) No. 6a of the German Commercial Code (HGB), this compensation is only considered granted as of the end of the respective three-year assessment period, as the conditions governing target achievement are only deemed to have been met as of this time.

**Supervisory Board compensation system laid down in Articles of Association.** Consistent with the provisions in the Articles of Association, each member of QSC's Supervisory Board receives fixed annual compensation of € 35k payable after the end of the financial year. The Chairman and his or her Deputy receive € 70k and € 50k respectively. In addition to compensation for their duties on the Supervisory Board, each Supervisory Board member receives separate compensation of € 5k for their activities in any Supervisory Board committee (except the Nomination Committee). Committee chairmen receive € 10k. Members sitting on several committees nevertheless receive a maximum total of € 25k for their committee activities. Supervisory Board members sitting on the Supervisory Board or a committee for only part of a given financial year receive prorated compensation.

**Supervisory Board compensation for the 2018 financial year.** As in the previous year, for its activity in the 2018 financial year the Supervisory Board received total compensation of € 315k. The table on the following page presents individualised information about the compensation paid to Supervisory Board members, as well as about their respective holdings of shares and conversion rights:

| | Compensation as per § 15a of Articles of Association (€ 000s)[1] | | | | Shares | | Number of convertible bonds | |
|---|---|---|---|---|---|---|---|---|
| | 2018 | | 2017 | | 31 Dec. 2018 | 31 Dec. 2017 | 31 Dec. 2018 | 31 Dec. 2017 |
| Dr. Bernd Schlobohm, Chairman | 95 | (25) | 95 | (25) | 15,519,910 | 15,519,910 | 132,000 | 132,000 |
| Dr. Frank Zurlino, Deputy Chairman | 60 | (10) | 60 | (10) | 10,000 | 10,000 | - | - |
| Gerd Eickers | 40 | (5) | 40 | (5) | 15,577,484 | 15,577,484 | - | - |
| Ina Schlie | 45 | (10) | 45 | (10) | - | - | - | - |
| Cora Hödl[2] | 40 | (5) | 40 | (5) | - | - | 4,100 | 4,100 |
| Anne-Dore Ahlers[2] (until 12 July 2018) | 18 | - | 35 | - | - | - | 2,700[3] | 2,700 |
| Matthias Galler[2] (from 12 July 2018) | 17 | - | - | - | - | - | 2,700 | 2,700 |
| **Total** | **315** | **(55)** | **315** | **(55)** | | | | |

[1] Numbers in parentheses refer to compensation for committee activity included in total amount.
[2] Employee representative.
[3] Holdings at the time of retirement from the Supervisory Board.

Apart from the reimbursement of travel and other out-of-pocket expenses, no member received any further compensation or other advantages for personal services rendered over and above the compensation presented here, neither were any loans granted to Supervisory Board members. QSC maintains a liability indemnification insurance policy which covers the members of the Supervisory Board.

## Takeover-Related Disclosures

**Customary regulations for a listed company.** The following overview outlines the disclosures mandatory under § 315a (1) of the German Commercial Code (HGB). Overall, these involve regulations that are typical at listed companies. The following disclosures reflect the circumstances at the balance sheet date.

**Composition of issued capital.** Issued capital amounted to € 124,172,487 as of 31 December 2018 and was divided into 124,172,487 no-par registered ordinary shares. According to the Share Register, these shares were distributed among 27,333 shareholders.

**Limitations on voting rights or transfer of shares.** Each share grants one vote at the Annual General Meeting. A voting and pooling agreement is in place between the following shareholders with direct and indirect holdings in QSC: Dr. Bernd Schlobohm, Gerd Eickers and Gerd Eickers Vermögensverwaltungs GmbH & Co. KG. This agreement provides for the uniform exercising of voting rights and restrictions relating to the disposability of the pool-bound shares. The Management Board is otherwise not aware of any further limitations on voting rights or restrictions on the transfer of shares.

**Direct or indirect holdings of more than 10% of capital.** There are the following direct and (pursuant to § 22 of the German Securities Trading Act [WpHG] / § 34 of the version valid since 3 January 2018) indirect holdings in the Company's capital that exceed 10% of voting rights:

- Dr. Bernd Schlobohm, Germany, 25.05% of voting rights (of which 12.50% directly and 12.55% indirectly)
- Gerd Eickers, Germany, 25.05% of voting rights (indirectly)
- Gerd Eickers Vermögensverwaltungs GmbH & Co. KG, Cologne, Germany, 25.05% of voting rights (of which 12.55% directly and 12.50% indirectly)

**Bearers of shares with special rights conferring powers of control.** There are no special rights conferring powers of control.

**Voting right controls for employee holdings in capital.** There are no voting right controls.

**Appointment and dismissal of Management Board members.** The appointment and dismissal of members of the Management Board is governed by § 84 and § 85 of the German Stock Corporation Act (AktG) and by § 7 of the Articles of Association in their version dated 30 January 2017. Pursuant to § 7 of the Articles of Association, the Management Board comprises one or more individuals. The Supervisory Board determines the number of Management Board members. Even though issued capital exceeds € 3 million, the Supervisory Board may stipulate that the Management Board should consist of only one individual. The appointment of deputy members of the Management Board is permitted.

**Amendments to Articles of Association.** Pursuant to § 179 of the German Stock Corporation Act (AktG), amendments to the Articles of Association require a resolution adopted by a majority of at least 75% of issued capital represented at a shareholders' meeting. Pursuant to § 15 of the Articles of Association, the Supervisory Board is authorised to adopt amendments and additions to the Articles of the Association that are of a purely formal nature and in themselves do not involve any changes to actual content.

**Acquisition and buyback of treasury stock.** By resolution of the Annual General Meeting on 12 July 2018, the Management Board is authorised pursuant to § 71 (1) No. 8 of the German Stock Corporation Act (AktG) until 11 July 2023 to acquire QSC shares on a scale of up to 10% of issued capital. To date, the Management Board has not acted on this authorisation.

**Authorised capital.** By resolution of the Annual General Meeting on 27 May 2015, the Management Board is authorised, subject to approval by the Supervisory Board, to increase the Company's issued capital by up to a total of € 50,000,000 on one or several occasions up to 26 May 2020 by issuing new no-par registered shares in return for contributions in cash and/or kind (authorised capital). When drawing on authorised capital, the Management Board may, subject to approval by the Supervisory Board, exclude shareholders' subscription rights in four cases: (1) to exclude residual amounts from shareholders' subscription rights; (2) when the new shares are issued in return for contributions in kind, particularly in the context of company acquisitions; (3) if, pursuant to § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG), the new shares are issued in return for cash contributions and if, at the time of final stipulation, the issue price does not fall materially short of the stock market price of the shares already listed; and (4) to the extent necessary to issue subscription rights for new shares to the bearers or creditors of warrant and/or convertible bonds in order to avoid dilution of their respective holdings.
This authorised capital is intended to enable QSC to react swiftly and flexibly to opportunities arising on the capital market and where necessary to obtain equity capital on favourable terms. No use was made of authorised capital in the past financial year.

**Conditional capital.** The Company had conditional capital totalling € 46,490,365 as of the balance sheet date. This was divided into Conditional Capital IV (€ 40,000,000), Conditional Capital VII (€ 750,365), Conditional Capital VIII (€ 5,000,000) and Conditional Capital IX (€ 750,000).
Conditional Capitals VII, VIII and IX serve to secure the conversion rights of bearers of convertible bonds that QSC has issued or may issue within the framework of existing stock option plans to Management Board members (Conditional Capital IX), Management Board members, managing directors of affiliated companies, employees of QSC and affiliated companies (Conditional Capitals VII and VIII) and other parties contributing to the Company's success (Conditional Capital VII). Conditional Capital IV may be used by the Management Board to create tradable warrant and/or convertible bonds. The Management Board is authorised by resolution of the Annual General Meeting on 27 May 2015 to issue such instruments in order to access an additional, low-interest financing option given favourable capital market conditions. The convertible bonds may be issued in return for both cash contributions and contributions in kind. The Management Board is authorised, subject to approval by the Supervisory Board, to exclude shareholders' subscription rights to these warrant and/or convertible bonds in four cases: (1) to settle residual amounts resulting from the subscription ratio; (2) when the bonds are issued in return for contributions in kind, particularly in the context of company acquisitions; (3) if, in the case of bonds being issued in return for cash contributions pursuant to § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG), the issue price does not fall materially short of the market value of the bonds; and (4) to the extent necessary to issue subscription rights to the bearers or creditors of warrant and/or convertible bonds previously issued in order to avoid dilution of their respective holdings. To date, the Management Board has not acted on the authorisation to issue tradable warrant and/or convertible bonds.

**Capital limits for the exclusion of subscription rights.** The exclusion of shareholders' subscription rights pursuant to § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG) may only apply for the use of treasury stock, for the issue of new shares from authorised capital and for the issue of warrant and/or convertible bonds corresponding to an aggregate total of no more than 10% of issued capital during the term of the respective authorisation. Apart from this, the exclusion of shareholders' subscription rights for the issue of new shares from authorised capital and for the issue of warrant and/or convertible bonds (including those issued within QSC's stock option plans) may not exceed an aggregate total of 20% of issued capital during the term of the respective authorisation. Treasury stocks sold to the exclusion of subscription rights would be imputed 20% of issued capital limit if they were sold during the term of the other authorisations.
Further details apply in accordance with the underlying resolutions adopted by the Annual General Meeting for each of these measures.

**Material agreements conditional on a change of control due to a takeover bid.** In the 2014 financial year, QSC agreed five promissory note bond contracts with a financial institution with a total volume of € 150 million (balance as of 31 December 2018: € 54 million). These allow the lender to terminate the agreements prematurely should a natural person or legal entity or a group of persons and entities acting in concert directly or indirectly acquire more than 50% of the shares or voting rights in QSC.
In the 2018 financial year, QSC agreed a syndicated loan agreement with six financial institutions which has a credit limit of € 100 million. This allows the lenders to terminate the agreement prematurely should a natural person or legal entity or a group of persons and entities acting in concert gain control over QSC. In this respect, control is defined as the right or the de facto ability to exercising a controlling influence as defined in § 17 of the German Stock Corporation Act (AktG) and "acting in concert" has the meaning attributed in § 2 (5) of the German Securities Takeover Act (WpÜG).
The Company has no further material agreements conditional on a change of control due to a takeover bid.

**Compensation agreements in the event of a takeover bid.** No compensation agreements in the event of a takeover bid have been concluded either with the Management Board or with employees.

# NON-FINANCIAL DECLARATION (unaudited*)

## Basic Principles

**QSC thinks and acts sustainably.** To succeed in the longer term, businesses have to think and act sustainably and cannot limit this approach solely to economic factors. Since its foundation, QSC has therefore always accorded high priority to employee, social and environmental concerns as well. Respect for human rights and measures to combat corruption and bribery are a matter of course at the Company. In what follows, QSC reports in accordance with the statutory requirements set out in § 315b and § 315c of the German Commercial Code (HGB) on these topics and on other non-financial topics that are important from the Company's perspective. In compiling this information, QSC has taken the German Sustainability Code as (DNK) as a framework for reference.

As the creation of sustainable value is the key focus of its strategy, however, QSC sees no reason to present a separate sustainability strategy and thus fully comply with the legal requirements that are in any case tailored to large companies with global operations (further information about Strategy on Pages 31 to 32.) QSC has a variety of processes, programmes and approaches in place to safeguard its sustainability. The detailed compilation of dedicated concepts pursuant to § 315c in conjunction with § 289c (3) Nos. 1 and 2 HGB for each of the aspects listed in § 289c (1) HGB would nevertheless require disproportionate expense. Moreover, this topic has to date only been of subordinate significance to the Company's stakeholders, to the extent that it has been raised at all. Furthermore, QSC is managed exclusively on the basis of financial performance indicators (further information about Corporate Management on Pages 34 to 35.)

SEE PP. 31–32
STRATEGY

SEE PP. 34–35
CORPORATE MANAGEMENT

In terms of the relevant contents, QSC exceeds the statutory requirements, in some cases significantly so. That is especially apparent in the information provided below on employee concerns, compliance, data protection and information security. A responsible approach towards the environment is inherent in the Company's very business model. QSC is digitalising the German SME sector and enabling companies in this sector to move forward to the new and in many respects resource-effective age.

**Sustainability is relevant to all departments.** Given the various interconnected factors involved, QSC views sustainability as a topic which is relevant to all departments and has therefore not established a separate position for this purpose. Sustainability rather affects the daily lives of nearly every employee and is lived in their day-to-day work. Corresponding rules are already set out in the "Code of Conduct" – the set of behavioural norms generally applicable at QSC – with examples including "We take responsibility for society and the environment" or "We condemn all forms of bribery and corruption" (see www.qsc.de/en/code-of-conduct).

WWW.QSC.DE/EN/
CODE-OF-CONDUCT

The importance attached to sustainability is reflected in the allocation of this topic to the responsibilities of the Chief Executive Officer. He is reported to by a workgroup comprising representatives from all relevant departments. The managers involved ensure that material sustainability aspects are factored into the Company's opportunity and risk management. This way, QSC

* The sections marked with the word "unaudited" have not been reviewed by the auditor.

SEE P. 91 OPPORTUNITY MANAGEMENT

SEE PP. 82 – 87 RISK REPORT

ensures that opportunities and risks newly arising as a result of the attention paid to sustainability are identified, recorded and assessed at an early stage. Further information about opportunity management can be found on Page 91 of this report, while the Risk Report is presented on Pages 82 to 87.

**Material sustainability aspects from the perspective of stakeholders and QSC.** One key task performed by the workgroup referred to above involves determining which sustainability aspects, based on the catalogue of criteria set out in the German Sustainability Code (DNK), are of material relevance to the Company's own future operating capacity. The Company regularly exchanges opinions with important stakeholders, such as customers, sales partners and employees. Alongside direct contacts made by the sales department, numerous customer dialogue forums are also available on all levels, ranging from specialist exchanges to meetings held on Management Board and Managing Director level. The partner sales department regularly holds roadshows and conferences. The central communications platform for employees is the intranet, which is supplemented by face-to-face events in the form of employee meetings and networking events.

**QSC's materiality matrix comprises four clear focuses**

The materiality matrix presented below summarises all aspects that are of material significance from the perspective of QSC and its stakeholders. The matrix shows four key focuses, namely employee concerns, data protection and information security, customer management, and resource-efficient energy use. Despite their undisputed importance, other topics are not material for QSC, particularly as they do not involve any material risks in relation to the Company's business activities or its business relationships, products and services.

**QSC's materiality matrix**


1 Information security
2 Customer satisfaction and retention
3 Service quality
4 Data protection
5 Employee retention and development
6 Cybersecurity
7 Ethical business practices and compliance
8 Energy efficiency at data centres
9 Stakeholder involvement (= dialogue with stakeholders)
10 Attractive and family-friendly employer
11 Training and securing next generation of employees
12 Regenerative energies
13 Employee health and wellbeing
14 Codetermination
15 Resource-saving operations and business operations

## Employee and Social Concerns

**QSC's success driven by employees' commitment and willingness to perform.** Not least for that reason, the Company accords high priority to employee and social concerns. Its personnel strategy aims to retain and further develop existing specialists and executives and to recruit sufficient numbers of next-generation staff and specialists. This strategy aims to enable QSC both to meet ever new requirements on the part of its customers in the digital age and to address these challenges chiefly by qualifying its own employees for the tasks involved. After all, the shortage of specialists on the labour market is one of the key risks the Company faces, as is outlined in greater detail in the Risk Report on Page 87.

SEE P. 87
RISK REPORT

As of 31 December 2018, the Company had a total of 1,282 employees as against 1,342 employees one year earlier. Over the course of the year, QSC acquired 177 new specialists and executives, particularly in its Cloud, IoT and Consulting businesses, while 237 employees left the Company.

**Diverse measures to boost employee satisfaction.** QSC offers its employees positions with good future prospects at attractive locations throughout Germany. Employees benefit from a pleasant working environment, flat hierarchies and modern and flexible working conditions. The Company attaches very great value to dialogue and to maintaining a fair relationship with all its employees.
It has established numerous networking formats to boost its employees' sense of affiliation. These range from teambuilding measures and breakfasts with Management Board members to the summer party. Taken together, these measures form a good foundation for retaining specialists and executives and for maintaining their satisfaction.

**Five principles shape the corporate culture.** QSC values agile and transparent processes and vibrant communications. It therefore promotes a culture of interaction, expects its employees to show initiative and think of new ideas and supports them in doing so. This is also reflected in the "High 5" company principles set out below, which form the basis for our corporate culture and guide us in our actions both within and outside the Company:

**QSC accords value to agile, transparent processes and vibrant communications**

1. **We want to win!** We work in a highly competitive environment.
   We are the better choice for our customers.

2. **We are shaping change!** We work in the world's most exciting industry.
   Implementing new technologies and alliances is what drives our business.

3. **We look after each other!** We work in dynamic times and a complex world.
   However mobile, flexible and intense our work is, we nevertheless look after our own health and that of our colleagues.

4. **We are results-focused in our work!** We work to generate sustainable profits. Our processes are efficient.

5. **We treat each other with respect and appreciation!** We are all different. By understanding each other, we turn these differences into a source of strength.

**Training and work-study programmes secure next generation of employees.** QSC is convinced that a sustainable personnel policy automatically involves a clear commitment to providing training. By supporting young people at the outset of their careers, the Company also secures its own next generation of employees in a period characterised by a substantial shortage of specialists. QSC offers two ways to enter the world of work: On the one hand, it provides vocational training for budding IT specialists majoring in system integration and application development and for IT business specialists, IT systems electricians and office management specialists. On the other hand, it enables young people to participate in work-study programmes in applied IT, business IT or business administration. For the work-study programmes, QSC cooperates with Nordakademie in Elmshorn and the FOM University of Economics & Management, Cologne. At the end of 2018, QSC employed 60 trainees and 17 work-study programme students. These were joined by 34 students who worked at QSC and were additionally pursuing a specialist study programme.

**60**

**trainees at QSC at end of 2018**

In the past financial year, QSC offered positions to 20 young people (4 work-study programme students and 16 vocational trainees) upon the completion of their training or studies and plans to hire 30 new career starters in 2019 (of which 6 work-study programme students and 24 vocational trainees). The Company actively markets the opportunities involved in vocational training. Further opportunities for making contact at an early stage include pupil internships, school partnerships and participation in nationwide career days ("Girls' Day" and "Boys' Day").

**Targeted recruitment of talented employees.** QSC covers only part of its need for specialist staff with its own vocational training and work-study programmes. It therefore additionally recruits university graduates and experienced specialists and executives. In the competition for the best candidates, QSC benefits from its nationwide presence with attractive locations and a wide range of measures aimed at sharpening its profile as an employer, as well as from cooperations with universities and other organisations, such as retraining providers and job centres. Kununu, the leading employer assessment portal, for example, lists QSC as an "open company" and a "top company". Company employees receive a bonus if they acquire new colleagues.

**SAP Junior Programme for university graduates has 24 participants**

In its Consulting business, QSC has set up a separate SAP Junior Programme for university graduates. With its comprehensive training and coaching concept, this programme is currently assisting 24 participants to start out on their careers. It provides them with ideal preparation for the challenging activities involved in SAP consulting. By offering this well-received junior programme, QSC is enhancing its attractiveness as an employer in times in which there is a widespread shortage of suitable specialists.

**QSC Academy is the centre for employee development.** In the digital age, the learning process certainly does not end upon the successful completion of vocational training. Only ongoing further training can help employees to fully develop their potential. As a responsible employer, QSC provides a wide range of training opportunities. The centrepiece of this system is the QSC Academy, which offers a broad range of seminars. These encompass numerous high-quality learning solutions for developing the specialist, methodological and social skills of all employees. An up-to-date mix of on-site events, webinars and online training units takes due account of the different potential and preferences of individual employees. Managers holds regular meetings with employees to assess their individual competencies, evaluate their potential and identify any development needs they may have. This process gives rise to targeted training measures which help the employees to advance their personal or specialist skills. In the fast-moving digital world, demand mainly focuses on targeted training and certification measures for new topics. These should enable employees to react just as swiftly to the rapid changes in the market.
This being so, QSC also welcomes any wish shown by its employees to study for first or master's degrees and supports them in pursuing this aim. In the past financial year, specialist staff started out on courses including bachelor's and master's degrees in "Business IT/IT Management", "Software System Development" and "Business Administration".

**QSC supports its staff in pursuing bachelor's and master's studies**

QSC accompanies executives on an ongoing basis, draws on this approach to promote a common understanding of management responsibilities and supports its executives in addressing challenges. A platform offering fresh ideas on topics such as leadership and "Work 4.0" is available across all locations. This also promotes networking and encourages colleagues to offer one another advice. Furthermore, managers at individual departments also look very closely at the ways in which management culture and conduct can influence the work atmosphere and productivity and how these factors can sustainably impact on the Company's success. Independently of these measures, all managers regularly attend seminars to update their knowledge of topics such as labour law and compliance.

**Advice on professional, personal and health-related topics.** Professional skills are not the only factor which influences the level of commitment shown by employees. In view of this, QSC has offered support for years now in helping its employees to solve any professional, personal and health-related issues they may have. To this end, the Company cooperates with the Fürstenberg Institut. QSC employees and their relatives are entitled to receive advice from specialists either in person or by telephone, and that free of charge. The Institut is obliged to maintain absolute confidentiality. Managers can also draw on personal coaching provided by the Fürstenberg Institut.

**Staff health and wellbeing.** The advice provided by the Fürstenberg Institut is just *one* component of the measures QSC takes to promote its employees' health. The Company regularly holds "health days" and works together with external partners for this purpose. Offerings which remain popular here include free influenza vaccinations and eye tests. In cooperation with a large optician's chain, QSC supports its employees in acquiring glasses for screen work. Finally, QSC supports its employees with occupational integration management (OIM) and assists them in restoring and maintaining their ability to work.

**~ 8%**

**of workforce mostly working from home**

**Attractive and family-friendly employer.** As a responsible employer, QSC respects the personal situations of all its employees and takes due account of their wishes within the range of options available to a medium-sized employer. Consistently flexibly working hours assist employees to combine their family and work commitments. There are no core working hours and, in agreement with their supervisors, employees are free to perform part of their work from home. At present, around 8% of employees even perform the predominant share of their work from home offices. Young parents in particular draw on the option of working from home. QSC welcomes every new "citizen" with a one-off gross allowance of € 1,000 and a QSC bobby-car. Several crèche places are also available at the Company's location in Hamburg. The Fürstenberg Institut advises parents on childcare-related issues. Should the regular care not be available for children aged from 4 months to 6 years, for example, then the experts at the institute can organise emergency care, which may even involve organising ad-hoc visits to a sick child at home.

**Compliance with ILO core labour standards.** Taking a responsible approach as an employer naturally also involves ensuring compliance with all legal requirements and core conventions of the International Labour Organization (ILO). The ILO lists four fundamental conventions: freedom of association and protection of the right to organise collective bargaining, the abolition of forced labour, the abolition of child labour and the prohibition of discrimination in employment and occupation. In Germany, all four conventions are governed by clear legal requirements and are unreservedly complied with by QSC.

**Diversity and antidiscrimination.** In Germany, the topic of discrimination has entered centre stage in recent years in connection with the discussions surrounding diversity. QSC decisively rejects any form of discrimination. In the five principles underpinning its corporate culture, it clearly states: "We treat each other with respect and appreciation". The diversity of QSC's workforce speaks for itself: 4% of employees have foreign passports, but the share of the workforce with international roots is of course far higher. At 22%, the female share of workforce remains comparatively low. This is still due above all to the ongoing discrepancies shown by men and women in their choice of occupation. Technical training and study programmes generally attract a far lower share of women than men.
QSC is actively tackling this challenge and participating in several initiatives aimed at attracting more women to technical professions. These include "Girls' Day", which gives school-aged girls initial insights into working at a technology-driven company, as well as work experience and internships for school pupils and college students.

**Compliance with employee rights.** Since the beginning of the 2018 term, QSC has had a 13-member Works Council and a 9-member Works Council at its TC subsidiary Plusnet. The Company involves these bodies at an early stage of discussions of any personnel and welfare topics. These discussions are conducted on a basis of trust. Management Board members are regularly invited by the Works Councils to attend staff meetings, to present their ideas and answer questions.

Over and above legal requirements and company agreements, QSC also makes efforts to promote the health and wellbeing of its employees. It does this by regularly sharing and agreeing ideas with the Works Councils. Any organisational changes under consideration are discussed with the Works Councils in good time, as are all one-off projects, such as the setting up of an occupational integration management (OIM) system and the activities surrounding the spin-off of Plusnet.

**QSC is not bound by any collective bargaining agreement.** In cooperation with the Works Council, the Company makes its own efforts to ensure an attractive working environment and provide a market-based compensation system. In terms of the compensation paid and benefits granted, this is geared to individual and company-specific needs, as well as to market standards. In addition to their fixed salaries, all employees also receive variable compensation based on the achievement of corporate targets. The share of employees' total salaries attributable to variable compensation rises with increasing responsibility.

**Variable compensation share rises in line with responsibility assumed**

**Social concerns – focus on surrounding areas.** In its social commitment, QSC has traditionally focused on its surrounding regions. The Company makes donations in cash and in kind to organisations in the vicinity of its locations, such as the Kita Nord crèche facility in Hamburg. Here, QSC is also one of the partners in the "Hamburger Weg" project, which works to develop and promote talent in the city with key focuses on education, welfare and sports projects.
As a medium-sized company, QSC's ability to influence political topics is very limited. The Company is a member of the Association of Telecommunications and Value-Added Services Providers (VATM) and employs its own regulatory expert to maintain a dialogue with decision-makers, especially in Berlin and Brussels.

## Compliance

**Company's success built on integrity, ethical conduct and personal responsibility.** All of QSC's employees are therefore obliged to uphold ethical business practices. QSC strictly ensures that all its employees and corporate bodies always comply with applicable laws, the Company's own internal guidelines and its codes of conduct. Compliance defines the conduct shown by all employees towards customers, other employees and colleagues, investors, executives and the social surroundings in which the Company operates. QSC prohibits all actions, whenever and wherever they may occur, which breach applicable laws or its own internal guidelines and codes of conduct. This approach naturally also includes measures taken to combat bribery and corruption.
As compliance aims to prevent any unlawful or inappropriate business decisions, suitable considerations are integrated into the relevant business processes in advance. This reduces QSC's liability risks and enhances the Company's image as a reliable partner, particularly with its small and medium-sized customers.

**Compliance management system ensures integrity and lawful actions.** In agreement with the Supervisory Board, the Management Board has implemented a compliance management system (CMS) to ensure legally correct conduct throughout the Company and at its business partners. The basic elements of this system include:

- Establishing a compliance culture
- Clearly defined compliance targets
- Continual identification and evaluation of compliance risks
- A compliance programme geared towards limiting compliance risks and thus avoiding any breaches of compliance
- A compliance organisation suitable to the size of the QSC Group and integrated into the Company's organisational structures
- Compliance communications tailored to the needs of the respective addressees
- Permanent monitoring and improvement of the CMS

Further development of the CMS takes place on an ongoing basis. This process accounts for changes in the business environment, as well as for proposals resulting from compliance processes. Due account is also taken of the findings of effectiveness audits performed by the Internal Audit department and of improvements suggested by employees. The effectiveness of the CMS is also regularly monitored in the audits performed by the internal audit department.

**Regular risk inventory.** The risks which could prevent QSC from achieving its compliance targets are identified and assessed at least once a year. Regular risk inventories also help the Company to prioritise suitable measures intended to prevent unlawful actions. These measures form the basis for the compliance programme which, among other aspects, includes requirements and recommended actions in the form of policies, work instructions and process descriptions that are applicable either on a uniform basis throughout the Company or to specific business units and departments. The compliance principles set out clear requirements in terms of the conduct to be shown by employees and are backed up by internal regulations governing areas such as risk and emergency management, data protection, information security, the ban on insider trading, gifts, invitations and events, and conduct towards advisors. Employees can view all of the internal regulations at any time on the Company's intranet.

**Compliance principles set clear standards for employees' conduct**

**CEO is responsible for compliance.** Responsibility for the CMS is directly incumbent on the Chief Executive Officer. The Management Board has clearly allocated the roles and responsibilities involved in implementing a CMS within the Company's organisational and process structures. Given that QSC is still a medium-sized company, that the risk propensity of its business activities is not especially high and that its current target customer group is predominantly located within Germany, the Company has adopted a centralised approach when structuring its compliance organisation.
The Compliance Officer is the head of the internal audit and compliance department ("head of compliance"), which is located in organisational terms directly beneath the CEO. This particularly

safeguards the independence of the Compliance Officer. The head of compliance is responsible for structuring, further developing and implementing the CMS across the Group and reports directly to the CEO. Following agreement with the Management Board, he or she also regularly reports to the Supervisory Board and its Audit Committee. In the event of material compliance problems in which the Management Board is directly involved, the Compliance Officer is entitled and obliged to inform the Supervisory Board Chairman or the Audit Committee Chairman directly. The head of compliance is supported in his or her work by other employees in the internal audit and compliance department and liaises closely and regularly with the heads of the legal, personnel and IT security departments.

**QSC safeguards the independence of its Compliance Officer**

**Intranet provides extensive information about compliance-related topics.** Within the Company, the internal audit and compliance department generally uses the intranet to keep employees informed and, for this, works closely with the corporate communications department. There is a separate department page for this purpose. As well as providing specialist contents relevant to the topics addressed, this page particularly informs employees about reporting duties and the channels to be used to report compliance-related matters. In significant cases, standard intranet communications are supplemented by separate mails sent to inform all employees. These communications are backed up by an extensive training programme which raises awareness for the topic among all of the Company's employees.
Despite all preventative measures, the possibility of legal infringements and severe breaches of duty arising at the Company cannot be fully excluded. All infringements detected must be reported by the manager of the employee in question and the head of department to the head of personnel, and to the head of the respective business unit in the case of severe infringements. Material compliance-related infringements are additionally reported to the head of compliance, who is also kept regularly informed about the scope of and reason for any disciplinary measures taken by the personnel department in this regard.
In December 2017, QSC implemented "Safe Channel", an institutionalised electronic whistleblowing system. This can be used by employees, as well as by external third parties, such as business partners or customers, to provide tip-offs of irregular conduct. Confidentiality is guaranteed and tip-offs may also be submitted anonymously. Specially trained individuals who are obliged to maintain confidentiality investigate every tip-off received which is legitimate and sufficiently specific.

**Internal codes of conduct.** QSC's compliance policies include internal codes of conduct and guidelines for the Company's business activities. They are applicable to every member of the Company. The utmost priority is accorded to lawful conduct. This is an intrinsic part of QSC's corporate culture and a matter of course for all of its employees. The Company particularly condemns any form of bribery or corruption. All transactions without exception are performed on a lawful basis. No form of bribery or corruption, whether it be on the part of Company employees, or of sales and cooperation partners, will be tolerated. Any action which creates the mere impression of influence being exerted on or by a business partner should be avoided (see the complete "Code of Conduct" at www.qsc.de/en/code-of-conduct).

WWW.QSC.DE/EN/
CODE-OF-CONDUCT

**Unrestricted application of zero tolerance policy.** In sanctioning any compliance-related infringements, QSC pursues a zero tolerance policy. No infringement of any legal requirements or in-house guidelines will be tolerated. For this reason, any such infringement will be immediately, suitably and clearly sanctioned without regard for the individual involved or the position he or she holds. In determining the nature and scope of sanction, due account is taken of the actual circumstances leading to the infringement, as well as of the legal and economic implications of such. The Management Board is exclusively responsible for imposing any such sanctions. For infringements whose implications are expected to be more minor, however, it may delegate the determination of suitable sanctions to the relevant division or department head.

**Regular certifications.** High-quality compliance goes hand in hand with well-functioning management systems. For that reason as well, QSC has structured its management systems in line with internationally recognised norms and has these regularly certified by external bodies. The two certifications set out below are of key importance in this regard:

**Quality management system covers all business fields**

- **ISO 9001.** QSC operates a quality management system (QMS) under ISO 9001:2015 and has the effectiveness of this system reviewed each year by an external certification company. This certificate, which is valid across all business units, safeguards QSC's compliance with the requirements placed in its products and services by its customers, as well as by the law and the relevant authorities. This provides the Company with opportunities to continuously enhance the satisfaction of its customers, and that in the most efficient way possible, as well as to secure competitive advantages.

- **ISO 27001.** The data centres in Hamburg, Cologne, Munich and Nuremberg have been certified under ISO 27001:2013 for many years now, thus documenting that they have information security management systems based on the leading international norm in this area. This is checked each year by an external certification company.

## Data Protection

**QSC complies with what are probably the world's strictest data protection requirements.** The location of QSC's operations in itself shows that the Company accords absolute priority to data protection. After all, as a German company it is subject to European data protection requirements, which are probably the strictest in the world. Not only that, data is the most valuable asset which customers entrust to QSC. For that reason alone, the Company makes every effort not only to meet their expectations but to further extend their level of trust.
QSC has issued a Data Protection Policy which sets out applicable regulations for collecting, processing and using the personal data of natural persons, and in particular the data of customers, shareholders and other third parties, as well as of contractual and business partners.

This policy takes particular account of the statutory requirements of the General Data Protection Requirement (GDPR), the German Federal Data Protection Act (BDSG) and the German Telecommunications Act (TKG). The processing of personal data in systems which enable the conduct or performance of QSC employees to be monitored or which record, store, process or use personal data of employees is governed by the "Framework Agreement for the Introduction and Operation of Information and Communications Systems".
All personal data is protected against the threat of unauthorised access. To this end, QSC has implemented suitable technical, organisational and employee-related measures which ensure that personal data is protected against unauthorised access, unlawful processing or dissemination and against accidental loss, unintended amendment and destruction. These measures address the security of that data requiring protection both when it is processed electronically and also in paper form. The technical, organisational and employee-related measures form part of the Company's integrated information security management and are continually updated to account for the latest technical advances and organisational changes.

**Group officer responsible for data protection.** A Group Data Protection Officer appointed by the Management Board monitors compliance with data protection requirements. In this capacity, the officer acts as the in-house authority and exercises his or her powers independently of instruction. The officer coordinates cooperation and agreement processes for all key data protection matters. Furthermore, he or she initiates data protection checks and audits while also accompanying the specialist aspects of our customers' external audits. The Group Data Protection Officer is supported by data protection coordinators at the group companies. These act as contact partners for local employees in matters relating to data protection.
Specialist departments are obliged to inform the data protection coordinators of any new processing of personal data. The Group Data Protection Officer is involved at an early stage in the development of new products and services to ensure that these conform to the principles of data protection law. This advance review enables the Company to avoid virtually all costly subsequent amendments.

**Regular audits check compliance with Data Protection Policy**

Compliance with the Data Protection Policy and applicable data protection legislation is reviewed in regular data protection audits. Customers also perform regular audits to check compliance with the high standard of data protection at QSC. Furthermore, external data protection audits are conducted at regular intervals by the German Federal Officer for Data Protection and Freedom of Information (BfDI), as well as by the German Federal Network Agency in the telecommunications business unit.

**Regular training for all employees.** Employees are provided with training on the requirements of data protection law when they join the Company. This training is followed by regular information about specific data protection topics relating to customer and employee data. In connection with the General Data Protection Regulation (GDPR), which took effect in May 2018, the Company refreshed the data protection expertise of all its employees with a detailed training programme.

## Information Security

SEE PP. 82 – 87
RISK REPORT

**IT security is an integral component of business policy.** Information and data security is quite simply the most important sustainability topic for IT companies like QSC. Only those companies which can guarantee data security at all times and in all places have earned the trust placed in them by customers. This is an absolute prerequisite for such companies being able to operate and act sustainably. In view of this, data and information security is a comprehensive, ongoing and strategic task which affects QSC in its entirety, and one that is understood and lived as an integral component of the Company's business policy. The Risk Report on Pages 82 to 87 provides information on those material risks which could harbour potential weaknesses.

**QSC has an integrated information protection concept.** This ensures that all information requiring protection – both customer and proprietary information – is secured with all appropriate technical and organisational means available and that such information is protected against unauthorised processing, incompleteness, distortion, disclosure, destruction, loss and misuse, as well as against perusal by unauthorised parties. Thanks to the information protection concept, it is always possible to trace every action back to the individual performing such action. This protects the information and transmission systems against unauthorised use and safeguards the operational readiness required at all times.

**Priority accorded to prevention and individual responsibility.** The Management Board bears overall responsibility for information security and data protection. As a general rule, it accords priority to preventive measures and individual responsibility rather than to control and supervision. Technical measures alone are never sufficient to uphold security. All employees are therefore regularly provided with information and training suitable to their respective roles. Responsibility for monitoring implementation of the requirements is incumbent on the managers of the respective business units. All employees have signed individual declarations in which they undertake to comply with the regulations governing information security, data secrecy and data protection, and in particular with the requirements of postal, telecommunications and social data secrecy. Before commencing their activities, external staff are required to provide an additional written undertaking that they will only use those systems, services and applications that are absolutely necessary for them to perform their respective assignments at QSC.

**Chief Information Security Officer responsible for information security.** The information security department, which is directed by the Chief Information Security Officer (CISO) and reports directly to the CEO, is responsible for IT security on an operational level. This department safeguards the development of the Information Security Policy and the associated standards and ensures that these are kept permanently up to date and consistently communicated within the Company. It is responsible both for introducing security programmes consistent with business requirements and for providing security services to protect the Company.

QSC complies with the measures and procedures for operators of critical infrastructures called for by the Federal Office for Information Security (BSI) in the German IT Security Act and included in the German Energy Industry Act (EnWG). The Company has implemented those measures required to protect against interruptions which could result in substantial interferences with telecommunications networks and services or from external attacks or the impact of catastrophes (business continuity management). Furthermore, as a provider of telecommunications services QSC is subject to the German Telecommunications Act (TKG) and takes all measures needed to protect the confidentiality of telecommunications and prevent any breaches of personal data protection. The Company's telecommunications and data networks are secured against unauthorised access. To this end, QSC has a security concept consistent with the requirements of the German Telecommunications Act and approved by the German Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway.

**Firewalls secure access to QSC's internal network**

**Proprietary data backup concepts for all systems and application data.** All relevant servers and all clients are equipped with virus protection programmes that are kept permanently up to date. Data backup concepts are in place for all systems and application data. Communication from outside the Company (WAN, internet) into the internal network (LAN) is only possible via network accesses that are secured by firewalls. Access from remote terminals to the network and systems at the group of companies is only authorised when special security procedures (callback procedures, use of tokens and/or VPN dial-in) are deployed. All employees who have a remote access authorisation have to authenticate themselves with a username and password. In the absence of additional protective measures, proprietary QSC hardware which is made available may only be used in the networks envisaged for the respective purpose. The use of other, third-party networks (home office, customer networks, hotels, hotspots, mobile communications etc.) is only permitted if the pre-configured security measures are also used. QSC's infrastructure is governed by very strict security standards. The buildings are permanently supervised, and the premises, outer building shells and several sensitive areas within buildings are monitored by a video surveillance system. Access to the building is monitored with an access control system. In some areas, singularisation systems such as turnstiles are also installed. Access authorisations are applied for using a workflow and have to be approved by the manager responsible for the respective section of the building. Fire, water and burglary detection systems are installed at the data centres and are monitored by the security department around the clock. Sprinkler systems are also installed to fight any fires. To secure the electricity supply, the data centres have separate lead-ins from two separate grids, an uninterruptible electricity supply for each circuit and diesel motors acting as independent emergency generators for special departments.

**Regular audits check compliance with relevant concepts and standards.** The status of overall IT security, specific security concepts and protective measure implementation is reviewed by a competent independent body in internal audits performed at regular intervals, and at least once a year. An external inspection agency may also be commissioned to conduct these audits. The emergency plans are also reviewed at two-yearly intervals.

## Customer and Quality Management

**Around 30,000 customers trust in QSC.** A total of around 30,000 medium-sized companies place their trust in QSC's products and services. Their satisfaction is the foundation for the Company's sustainable success – excellent service and consistently high quality provide the basis for its day-to-day cooperation with its customers. QSC addresses companies with more than 200 IT workplaces with its own employees, while smaller partners are generally supported by sales partners.
In terms of the topics covered, the portfolio is broken down into individual business fields. By working with flat hierarchies, QSC ensures greater proximity to the market and customers and ensures that it targets customers in ways suitable to the specific requirements of the individual market segments. Each business field has its own specially trained sales and customer advisors who maintain close contacts with their customers and who, based on detailed discussions, can react flexibly to their requirements. It is this proximity and uncomplicated approach that customers particularly appreciate. From their perspective, it is also what makes QSC stand out positively when compared with its larger competitors. Further competitive advantages which QSC enjoys from the point of view of its customers include its comprehensive range of services relating to digitalisation, its outstanding advisory competence, consistently high service and operating quality and compliance with the utmost security standards.
In view of this, QSC attaches particularly great value to ensuring that its employees offer competent advice and rapid, high-quality support to its customers. The Company communicates with its customers via a wide range of channels – from sales and sales partners to service management and support through to complaints and product management. Not only that, QSC provides a broad range of additional communications channels to offer customers and other interested parties an ongoing supply of information and support. The opportunities for direct dialogue include its website, extranets for specific target groups, blogs, mailing actions, various customer events, trade shows, telephone hotlines and all relevant social media channels.

**Regular surveys of customer satisfaction.** QSC backs up its day-to-day contacts with its customers and other interested parties by regularly having customer surveys performed by an independent institute. Customer satisfaction is surveyed in telephone interviews. Based on a predetermined questionnaire, all stations along the "customer journey" are dealt with, from the acquisition and tender process to service provision through to customer support, complaints management and the customers' willingness to recommend QSC.
These surveys, which are commissioned by the quality management department, are intended to identify the current relationship between customers' expectations and the way QSC satisfies their needs, to clarify strengths and weaknesses, identify potential enhancements to the Company's services and processes and detect trends in customers' expectations. The surveys question key customers and partners from across all sales segments. The findings are evaluated by the internal quality and process management departments, as well as by the Management Board. The key areas of action identified in terms of improving the Company's contacts with its customers, their experience of the QSC brand, and customer retention measures are translated into new quality targets and lead to a variety of measures within the organisational structure –

from product development through to corporate communications. The aim here is to permanently improve customer satisfaction. In view of this, alongside in-house measures customer surveys are a key component of the continuous improvement process at QSC.

**High quality standards.** QSC aims for complete customer satisfaction. As an agile service provider, the Company interacts with its customers in partnerships of equals, maintains an ongoing dialogue to understand them more closely and deals with their needs on an individual basis. The Company's own quality policy creates the framework necessary for this approach. This is mandatory for all employees and is regularly reviewed.

**QSC's quality policy sets framework and is binding for all employees**

QSC is aware that, in its capacity as digitaliser to the German SME sector, it directly affects the quality of its customers' performance and business processes. In view of this, information security and compliance with legal requirements are integral components of the Company's quality standards and of the service it promises to its customers. QSC make continuous efforts to develop and train the ability of all of its employees to think and act in line with its focus on customers and quality. This way, the Company also safeguards its own quality standards.

The performance and effectiveness of QSC's quality management system are regularly audited in the context of its certification under DIN EN ISO 9001:2015, with important contributions also coming from regular customer surveys.

**Regular setting of quality targets.** Once a year, the Management Board lays down quality targets that are consistent with QSC's quality policy and corporate strategy. These also account for the findings of the annual management review, the customer satisfaction study and the risk report. The business fields then translate these quality targets into operating quality targets. The key focus in 2018 was on three targets:

- Greater customer orientation and faster problem solving
- Dependable, reliable actions and more proactive communications with customers
- Greater awareness among customers of QSC as an innovative service provider able to offer a partnership of equals

## Environment

**Clear commitment to efficient handling of natural resources.** Responsible and sustainable corporate management also involves ensuring that natural resources are put to the most efficient possible use. Digitalisation can make a major contribution in this respect. As the digitaliser to the German SME sector, QSC is contributing significantly towards making its customers' operations more environmentally friendly. After all, digitalisation removes the need for many goods to be manufactured and transported. It also reduces the number of journeys which people have to make. Resource-efficient digitalisation, for example, ranges from digital (rather than print) media to remote maintenance and control through to the substitution of video conferences for business travel.

**Programmes to encourage resource-effective actions and business activities**

**Resource-saving operations and business activities.** QSC naturally looks closely at ways to reduce the volume of resources used in its own operations and business activities as well. Numerous options are available to encourage employees to save resources. These range from company bicycles, travel cards for local transport networks and car-sharing opportunities to video conference rooms through to a work environment which promotes paperless operations. Over and above this, QSC regularly makes efforts to enhance its employees' awareness of this topic and supports relevant training measures.
QSC's main focus is on implementing extensive measures aimed at continually optimising its energy use. Other natural resources play hardly any role in the Company's operations.

**Continuous reduction in data centre energy consumption.** When it comes to energy, QSC is making continuous efforts to reduce consumption, particularly at its data centres. Here, the Company only deploys hardware systems that meet the latest energy efficiency standards. The infrastructure systems (air conditioning systems, uninterruptible electricity supplies) work with smart, processor-assisted control technology which continually reviews energy expenditure. One key lever also relates to the increasing use made of "shared clouds", which involve joint use of computers rather than dedicated computer capacities for each individual customer.
These ongoing measures were supplemented in 2018 by numerous projects aimed at reducing electricity consumption. In Hamburg, for example, two data centre rooms were reequipped with speed-regulated recirculating coolers, a move which has resulted in falling electricity consumption. The speed settings of all recirculating coolers are now gradually being lowered. These steps are being accompanied by an ongoing programme to optimise operations at the cooling units with the aim of cutting electricity consumption by 3% to 5%.
As a matter of course, all of the larger companies regularly have energy audits performed by certified external energy consultants in line with the requirements of DIN EN 16247-1. These audits provide a good basis for detecting potential optimisations at an early stage and prioritising the resultant measures.

**100%**

**electricity from regenerative sources starting in 2018**

**100% electricity from regenerative sources.** Even when continually optimised, operations at the data centres are still energy-intensive. Since 2018, all of the electricity used at the centres has come from regenerative sources. The supplier is Stadtwerke Neumünster, which supplies electricity that is 100% attributable to carbon dioxide-free and environmentally-friendly hydroelectricity, as well as to combined heat and power plants working exclusively with biogenic fuels.

**Resource-efficient procurement.** Acquiring electricity from regenerative sources is just *one* aspect of the Company's sustainable procurement. The Central Procurement Policy requires due consideration to be given to the careful and well-considered use of natural resources in all procurement processes. These should always take due account of the basic principle of sustainable business activity and greater energy efficiency. These requirements are reflected, among other areas, in the acquisition of hardware meeting the latest energy efficiency standards and a modern company car pool. All suppliers are regularly evaluated and have to comply with the company-wide General Procurement Terms. This way, QSC ensures consistently high quality for its products and services. This in itself is a further key aspect of the Company's sustainable and resource-efficient business model.

# BUSINESS REPORT

## Overall Summary/Actual vs. Forecast Business Performance

**QSC increases revenues by almost € 9 million in 2018.** Benefiting from substantial growth in its Cloud and TC businesses, QSC increased its revenues from € 357.9 million in the previous year to € 366.8 million in 2018. Revenues were significantly ahead of the originally forecast range of between € 345 million and € 355 million and also exceeded the renewed raise in the revenue forecast to at least € 360 million issued in November 2018. In terms of its EBITDA and free cash flow, QSC met the targets published at the beginning of the year. At € 35.4 million, EBITDA was within the forecast range of € 35 million to € 40 million. The free cash flow amounted to € 12.2 million and was thus consistent with the forecast of more than € 10 million.

**2018 revenues well ahead of original forecast**

| | Targets | Actual 2018 results | |
|---|---|---|---|
| Revenues | ≥ € 360 million* | € 366.8 million | ✓ |
| EBITDA | € 35 – 40 million | € 35.4 million | ✓ |
| Free cash flow | > € 10 million | € 12.2 million | ✓ |

* Raised revenue forecast.

## Macroeconomic and Industry Framework

**German economy grows more slowly.** QSC focuses on the German market, where the economic upturn seen for many years now began to falter in 2018. Based on calculations by the Federal Statistical Office, gross domestic product grew by 1.5% in the past year compared with 2.2% in the previous year. The domestic economy was the main source of momentum, with further growth in private household and government spending, albeit less marked than in previous years. Gross investment showed notably stronger growth, rising by 4.8%.

**ICT market grows by 2% in 2018.** By analogy with the overall economy, the pace of growth in the German ICT market also slowed in 2018. Based on calculations compiled by the Bitkom sector association, revenues grew by 2.0% to € 166.0 billion. The IT business continued to act as the main growth driver, with IT revenues rising by 3.1% to € 89.9 billion in Germany in the past year. IT services, the market segment particularly relevant to QSC, grew by 2.3%. Revenues in the German TC market at least managed to stabilise in 2018. According to the Association of Telecommunications and Value-Added Services Providers (VATM), the revenues of € 59.4 billion were at the previous year's level. Revenues in the fixed-network landline business also remained consistent at € 32.8 billion, with cable network operators gaining market share from TC providers.

**The German ICT market**
(€ billion)


Three further trends in the German TC market are relevant to QSC. Firstly, there was a renewed increase in the number of call-by-call and preselect voice minutes, a business field in which QSC has traditionally operated. Secondly, DSL connections via bitstream preliminaries products offered by Deutsche Telekom ("Telekom") are gaining further in significance, and that at the expense of other forms of connection such as those long offered by QSC. Thirdly, the number of German households able to use fibre optic connections is steadily rising. In this business field, QSC is building up a strong market position by forging cooperations with municipal utility companies and regional suppliers.

**Two out of three companies in Germany use cloud services.** The cloud continues to act as a crucial growth driver in the German IT market. According to KPMG's latest "Cloud Monitor", two out of three companies now draw on cloud technologies. Here, companies are increasingly diversifying their cloud strategies and working with different models. QSC acted early to prepare for this trend – by developing its multi-cloud consulting and its ability to integrate a variety of cloud worlds into its own Cloud Services.

**44%**
**share of companies with IoT projects**

**Number of companies with IoT projects doubles.** QSC is also one of the pioneers in the German IoT market. According to a survey conducted by the market researcher IDG Research Services, 44% of companies in Germany implemented IoT projects in the past year. The equivalent figure for 2017 was just 21%. The areas of application are highly varied: 28% of the projects deal with Industry 4.0, and thus with networked production, 27% with logistics and 26% with quality control. With its broad-based structure, QSC's subsidiary Q-loud is equipped to address the manifold requirements of the market.

## Regulatory Framework

**Core sections of TC market remain regulated.** The German TC market is in key aspects subject to regulation by the German Federal Network Agency. This is intended to ensure fair competition. In the past financial year, the German Federal Network Agency took the following decisions relevant to QSC's business activities that will mainly lead to lower preliminaries costs.

**Approval of fixed-network interconnection and termination fees.** By way of a preliminary approval issued on 18 December 2018, the German Federal Network Agency published the interconnection and termination fees at Telekom which are valid for a two-year period from 1 January 2019. This decision has reduced termination fees by 20%, while interconnection fees were even cut by 43%. The cut in termination fees was due to the reduction in the average European fee used as a basis for comparison. In the case of the interconnection fees, the reduction was caused by the ongoing migration away from the public switched telephone network (PSTN) and thus by the fact that the associated costs are now only included in part. This will promote more efficient migration from PSTN to NGN.

**Termination fees due to fall another 20% from 2019**

**Approval of mobile telephony termination fees.** The German Federal Network Agency published the definitive approval of mobile telephony termination fees for the period from 1 December 2016 to 30 November 2019 on 6 March 2017 already. Accordingly, since 1 December 2018 these fees have only amounted to 0.95 cents/minute.

**Approval of L2 BSA fees.** In resolutions dated 8 March 2018 and 17 December 2018 respectively, the German Federal Network Agency approved the fees for L2 BSA access and, for the first time, L2 BSA super-vectoring. These involve bitstream-based preliminaries products. The fees for L2 BSA access were minimally reduced.

**Approval of CFV Ethernet 2.0 fees.** By resolution dated 4 October 2018, the German Federal Network Agency for the first time provided preliminary approval for the fees for CFV Ethernet 2.0. This is a corporate customer product offered on Telekom's broadband network gateway (BNG) which was launched in early 2019.

**Regulatory order for Market 4.** Based on the market definition for Market 4 issued in 2016, on 20 December 2018 the German Federal Network Agency published a regulatory order which, as previously, obliges Telekom to offer conventional and Ethernet-based leased lines as well as native Ethernet. Furthermore, access obligations were imposed on Telekom with regard to Ethernet VPN 1.0 and 2.0, as well as Ethernet P2MP 1.0 and 2.0. Should Telekom develop further high-quality bitstream products in future, then these too are covered by the obligation to provide access.

## Business Performance

**31%**

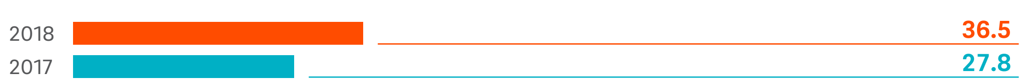
**growth in Cloud revenues in 2018**

**Growth in Cloud and TC businesses.** Parts of QSC's operating business performed better in 2018 than originally expected. That is particularly true of the TC segment, where revenues grew by 6% to € 200.9 million. The Cloud segment generated even higher growth in percentage terms. Revenues here surged by 31% to € 36.5 million in 2018. Revenues in the Outsourcing and Consulting segments, by contrast, showed substantial and slight reductions respectively.

**Cloud revenues up 31%.** QSC's newest segment increased its revenues to € 36.5 million in 2018, up from € 27.8 million one year earlier. This persistently high growth momentum was driven by success in both of the segment's business areas, namely Cloud Services and IoT products and services. In Cloud Services, QSC on the one hand supports existing Outsourcing customers in migrating their IT solutions from traditional on-premise environments to the cloud. On the other hand, new customers also opt for some or all of the modules available within QSC's proprietary cloud solution.

**Cloud revenues**

(€ million)




In early June 2018, for example, PEAC Germany – previously IKB Leasing – commissioned QSC to migrate its existing IT landscape to a multi-cloud solution. In future, the company will be procuring traditional IT applications and sector-specific applications on a centralised basis from QSC's proprietary cloud. Microsoft applications, on the other hand, will be provided from the global Microsoft Office 365 Cloud. As a certified Cloud Solution Partner for Microsoft, QSC will also see to integrating and managing these applications. This way, QSC will in future orchestrate and be responsible for the multi-cloud IT operations model at PEAC Germany.

**IoT subsidiary Q-loud scores highly with innovations.** QSC's subsidiary Q-loud documented its software and hardware competence for the Internet of Things in numerous projects implemented in 2018. Its "EnergyCam" solution was deployed, for example, in a project involving analogue electricity and gas meters at Munich Airport. The energy cameras scan the meter readings by camera and text recognition (OCR) and securely transmit these readings at brief intervals to a central IoT platform.

**QSC underlines its competence in the energy sector**

By unveiling its QSC Energy Management Cockpit in September 2018, Q-loud underlined its competence in the energy sector. This innovation makes Q-loud the first company in Germany to use the new SAP Leonardo environment to qualify an end-to-end IoT solution. The QSC Energy Management Cockpit is based on SAP technology and provides companies with visibility about their energy consumption across several locations and in real time.

The company presented a further innovation in December 2018 – the NB-IoT Tracker. This cigarette packet-sized device enables companies to permanently monitor the status and position of equipment and machines, for example in logistics, agricultural technology, construction or industry. Unlike solutions offered by competitors, Q-loud's innovation works with a narrowband wireless module. This technology is also available at less accessible locations, such as inside closed buildings. Not only that, it extends battery lifetimes and is significantly less expensive than using GSM or LTE technologies.

**Traditional Outsourcing business declining in significance.** Consistent with expectations, the revenues of € 91.0 million generated in the Outsourcing segment in 2018 fell short of the previous year's figure of € 102.0 million. This reduction was due on the one hand to changes in the customer base. One major customer had decided in 2017 to work together in future with an IT service provider with global operations. Not only that, the process of migrating existing customers to the Cloud segment has continued.

**Outsourcing revenues**
(€ million)

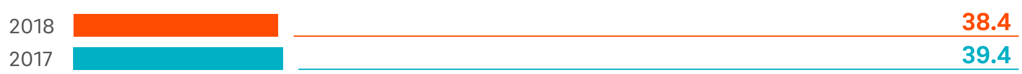

The extent to which traditional outsourcing and cloud services are merging is underlined by the further extension in the contract with Imperial Tobacco in June 2018. Under this agreement, QSC will see to major aspects of the company's IT operations and IT support in the next five years as well. This includes networking all German locations and providing applications and SAP services. Moreover, QSC will support Imperial Tobacco in implementing its global digitalisation strategy in future. This will involve gradually introducing cloud and multi-cloud services and optimising the group's own IT resources in both data centre and hosting environments.

**QSC offers support in implementing a global digitalisation strategy**

**Consulting actively focuses on S/4HANA launch services.** In its Consulting segment, QSC generated revenues of € 38.4 million in 2018, as against € 39.4 million one year earlier. The key focus of activities in this segment remained on offering services relating to SAP software and in particular to the launch of the new S/4HANA software generation. At present, however, there are not enough experts for this topic available in the market. The decrease in revenues is also a result of the noticeable lack of specialists. In the past financial year, QSC therefore increasingly relied on internal training and development measures and qualified a growing number of employees to provide S/4HANA advisory services.

**Consulting revenues**

(€ million)




QSC's existing S/4HANA competence convinced various companies in 2018. The Company's long-standing customer SportScheck, for example, extended its contract in the first quarter of 2018. In future, QSC will also provide this sports item retailer with various SAP systems based on SAP HANA via its proprietary cloud platform and accompany the migration of existing database systems.

**€ 12.2**

**million revenue growth in TC segment in 2018**

**Substantial growth in TC business.** Revenues in the TC segment rose to € 200.9 million in 2018, up from € 188.7 million in the previous year. This growth was chiefly due to the Company's success in the international termination business with resellers. Here, QSC benefited from a temporarily favourable market constellation and the permanent advantages offered by extremely efficient cost structures in its proprietary next generation network (NGN). Not only that, the Company witnessed a slight rise in demand for TC services from corporate customers. Customers extending their contracts in the first quarter of 2018 included the credit agency and debt collection service provider Creditreform. One of the core services offered by QSC involves centrally managing and monitoring heterogeneous network infrastructures irrespective of the access provider and the underlying technology.

**Telecommunications revenues**

(€ million)


One factor that is playing an increasingly major role is the Company's cooperation with regional energy suppliers and municipal utility companies as they expand their fibre optic infrastructures. In 2018, QSC agreed the provision of voice services with customers including the energy supplier "eins" in Chemnitz, a city where around half of businesses and households already have access to a fibre optic network. By entering into a cooperation with Zattoo TV Solutions, QSC also extended the range of services offered to these partners, who can now also market a "triple play offering" consisting of IP-based data, voice and TV services. Here, QSC has broadened its existing white label solutions to include the IPTV services offered by Zattoo, Europe's leading provider in this field.

**Spin-off of TC business approved by Annual General Meeting.** The AGM held on 12 July 2018 approved the spin-off of the TC business to a standalone company, QSC's wholly-owned subsidiary Plusnet. The corresponding entry was made in the Commercial Register as of 31 August 2018. Even in advance of the decision, the greater autonomy enjoyed by this new subsidiary had already freed up internal growth momentum.

Given the interest voiced by various companies in acquiring Plusnet, with the approval of the Supervisory Board the Management Board decided in September 2018 to take up talks with suitable interested parties concerning this strategic option. One precondition for any potential acquisition of a majority or all of the shares in Plusnet is that the transaction is executed on very attractive terms. All other strategic options are still on the table. Among others, these include independently developing the company's business further and entering into cooperations.

**Spin-off of Plusnet frees up fresh growth momentum**

## Key Performance Indicators

**Revenues rise to € 366.8 million in 2018.** As already outlined (see comments on Business Performance on Pages 73 to 75), QSC increased its revenues from € 357.9 million in the previous year to € 366.8 million in the past financial year.

SEE PP. 73 – 75
BUSINESS PERFORMANCE

**EBITDA totals € 35.4 million in 2018.** EBITDA for the past financial year amounted to € 35.4 million, as against € 38.3 million in 2017. Among other factors, this reduction was due to changes in the revenue mix. Above all, the share of revenues generated in the TC business with resellers, an area with comparatively weak margins, rose in 2018. Conversely, there was a decrease in the volume of Outsourcing revenues, which tend to have higher margins. As a result of these factors, the EBITDA margin came to 10%, compared with 11% in 2017.

**Free cash flow reaches € 12.2 million in 2018.** QSC generated a free cash flow of € 12.2 million in 2018, compared with € 12.6 million in the previous year. The Company calculates this key management figure as the change in net debt before acquisitions and distributions. The table below shows the relevant parameters at the balance sheet dates on 31 December 2018 and 31 December 2017.

| € million | 31 Dec. 2018 | 31 Dec. 2017 |
|---|---|---|
| **Liquidity** | **53.6** | **61.9** |
| Long-term other financial liabilities | (100.0) | (135.2) |
| Short-term other financial liabilities | (20.0) | (1.6) |
| **Interest-bearing financing liabilities** | **(120.0)** | **(136.8)** |
| **Net debt** | **(66.4)** | **(74.9)** |

SEE P. 80
SYNDICATED LOAN FACILITY

SEE P. 81
CAPITAL EXPENDITURE

It can be seen that that liquidity fell year-on-year by € 8.3 million to € 53.6 million. Over the same period, QSC reduced its interest-bearing financial liabilities by € 16.8 million to € 120.0 million. This reduction was due the premature redemption of all floating-interest five-year tranches of the promissory note bond that would originally have matured in May 2019. In return, QSC drew on part of the syndicated loan facility (see Page 80).
As a result, net debt fell by € 8.5 million to € -66.4 million as of 31 December 2018. As the free cash flow presents the financial strength of the operating business, QSC adjusts this key figure to eliminate payments for acquisitions and distributions. The distribution of a dividend of € 0.03 per share after the Annual General Meeting in July 2018 led to an outflow of funds of € 3.7 million. Adding this payment to the reduction in net debt produces a free cash flow of € 12.2 million. Unlike in the previous year, QSC no longer views capital expenditure as a key performance indicator (see comments on capital expenditure on Page 81).

## Earnings Performance

**Consistent gross margin.** The revenue growth seen in 2018 was accompanied by higher cost of revenues, which came to € 298.8 million as against € 291.1 million in the previous year. Gross profit improved to € 68.0 million, compared with € 66.8 million in 2017. The gross margin remained unchanged at 19%.
Sales and marketing expenses increased to € 29.7 million in the past financial year, up from € 28.5 million one year earlier. This increase was due among other factors to the new vertical organisation, which provides individual business fields with considerably greater leeway for their own sales activities. At € 30.9 million, general and administrative expenses were virtually unchanged on the previous year's figure of € 30.7 million. Other operating income and expenses came to a net total of € 1.0 million in 2018, compared with € -0.4 million in the previous year. Personnel expenses, an important component of all major cost items, decreased to € 101.4 million in the past financial year, down from € 106.9 million in 2017. As of 31 December 2018, the Company had a total of 1,282 employees compared with 1,342 one year earlier. Further information about QSC's employees can be found in the Non-Financial Declaration on Pages 56 to 60.

SEE PP. 56 – 60
NON-FINANCIAL DECLARATION

**Increased earnings strength of operating business.** QSC's operating earnings strength can better be understood if, by analogy with the quarterly reports, depreciation, amortisation and non-cash share-based compensation components are reported separately in the income statement. Consistent with IAS 1, these figures are therefore a component of the individual cost items in these consolidated financial statements. The following abridged income statement presents depreciation and amortisation as a separate line item.

| € million | 2018 | 2017 |
|---|---|---|
| **Net revenues** | **366.8** | **357.9** |
| Cost of revenues* | (276.7) | (266.1) |
| **Gross profit** | **90.2** | **91.8** |
| Sales and marketing expenses* | (28.3) | (27.2) |
| General and administrative expenses* | (27.5) | (27.0) |
| Other operating income and expenses | 1.0 | 0.7 |
| **EBITDA** | **35.4** | **38.3** |
| Depreciation and amortisation | | |
| (including non-cash share-based compensation) | (26.9) | (31.1) |
| **Operating profit (EBIT)** | **8.5** | **7.1** |

* Excluding depreciation and amortisation and non-cash share-based compensation.

**Operating profit (EBIT) rises 20% to € 8.5 million.** QSC generated EBITDA of € 35.4 million in the past financial year, compared with € 38.3 million in the previous year (see comments on Key Performance Indicators on Pages 76 and 77). In keeping with expectations, depreciation and amortisation showed a further reduction, decreasing from € 31.1 million in the previous year to € 26.9 million. This facilitated a further improvement in operating profit (EBIT), in this case from € 7.1 million in 2017 to € 8.5 million in the year under report.
At € -4.4 million, the financial result remained at the same level as in the previous year. Net of this item, earnings before taxes rose to € 4.1 million, up from € 2.7 million in the previous year. Compared with 2017, QSC reported a smaller positive item for deferred taxes in the past financial year. As a result of this, consolidated net income amounted to € 3.3 million, compared with € 5.1 million in the previous year.

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KEY PERFORMANCE INDICATORS

## Earnings Performance by Segment

**Dynamic growth confirms scalability of Cloud business.** Cloud, QSC's newest segment and the business field with the highest growth in percentage terms, significantly boosted its earnings strength in 2018. Within just one year, the segment margin in the Cloud business rose to 16%, up from 2% in 2017. The segment contribution grew from € 0.5 million in 2017 to € 5.7 million. This substantial increase was due on the one hand to the significant growth in revenues, which in a single year rose by € 8.7 million to € 36.5 million. On the other hand, the scalability of the Cloud business is now apparent. At € 24.1 million, the cost of revenues only increased by € 2.0 million in 2018.

**16%**

**Cloud segment margin in 2018**

**Cloud segment margin**


**Restructuring of Outsourcing business continues.** Responding to the decline in revenues, QSC pressed ahead with restructuring its Outsourcing segment in 2018 and, among other measures, significantly reduced employee totals. The associated one-off expenses mean that cost of revenues will only track the development in revenues at a later point in time. Due to this factor, cost of revenues only decreased by € 4.5 million to € 73.9 million in 2018, while revenues for the same period fell by € 11.0 million to € 91.0 million. This led to significant reductions in gross profit and the segment contribution. The latter figure came to € 11.5 million in the past financial year, compared with € 17.3 million one year earlier. The segment margin dropped by 4 percentage points to 13%.

**Outsourcing segment margin**


**Consulting business affected in 2018 by shortage of specialists**

**Attractive margin in personnel-intensive Consulting business.** QSC's Consulting segment noticeably felt the effects of the lack of suitably qualified specialists in 2018. In this situation, the Company on the one hand maintained its efforts to train and develop experts internally. On the other hand, it also optimised capacity utilisation rates for existing advisors. As a result of these factors, the cost of revenues – at € 31.5 million – fell short of the previous year's figure of € 32.9 million. Despite the slight decline in revenues, it was therefore possible to increase gross profit by € 0.4 million to € 6.9 million. As Consulting stepped up its sales efforts within the new, vertical organisational structure, the segment contribution remained unchanged at € 5.4 million. In what is a personnel-intensive advisory business, Consulting once again generated an attractive margin of 14%.

**Consulting segment margin**

**TC business generates highest margins.** The substantial increase in TC revenues in 2018 was accompanied by higher cost of revenues, which rose from € 132.7 million in the previous year to € 147.2 million. This disproportionate increase reflects the growing share of revenues with resellers in international voice termination, a business field characterised by high preliminaries costs. In view of this, the gross profit of € 53.7 million fell short of the previous year's figure of € 56.0 million. The segment contribution totalled € 39.2 million in 2018, as against € 41.5 million in the previous year. At 20%, the segment margin was nevertheless still higher than in any other segment.

**Telecommunications segment margin**


## Financial Position

**Two core objectives of financial management.** QSC's financial management serves to ensure smooth financing of the operating business and upcoming capital expenditure. In this, it pursues two core objectives – maintaining and optimising financing capacity and reducing financial risks. QSC invests its surplus liquidity exclusively in money market and low-risk investments. QSC deployed derivative financial instruments in the form of interest swaps once again in 2018. These serve to hedge the interest rate risk on floating-rate tranches of the promissory note bond. The Company also had two derivatives that were unused due to the premature repayment of the promissory note bond. These have terms running until May 2019. As virtually all of QSC's operations are in the euro area, the Company is not exposed to any exchange rate risks. Further information about financial risk management can be found in Note 41 of the Notes to the Consolidated Financial Statements.

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**Three sources of financing.** QSC bases its financing on three pillars: Firstly, it generates inflows of cash from its operating activities. Secondly, it draws on the funds received from a promissory note bond taken up in 2014 and, thirdly, it had a syndicated loan facility of € 100.0 million as of 31 December 2018. In the first half of 2018, QSC successfully negotiated an increase in its syndicated loan facility with the lending banks. Originally agreed at € 70.0 million in 2016, this facility has now been raised to € 100.0 million, thus prematurely safeguarding financing for the tranches of the promissory note bond due to mature in the coming year. In the fourth quarter of 2018, QSC then prematurely redeemed all floating-rate tranches due to mature in the coming year, amounting to a total of € 76.5 million, and, to this end, drew on an amount of € 65.0 million from the syndicated loan facility.

**Premature repayment of several tranches of promissory note bond**

**High inflow of funds from operating business.** The cash flow from operating activities amounted to € 34.1 million in 2018, compared with € 39.3 million in the previous year. The cash flow from investing activities came to € -17.7 million, up from € -21.8 million in 2017. The cash flow from financing activities totalled € -24.7 million, as against € -23.4 million one year earlier. This led cash and cash equivalents to change by € -8.3 million. As of 31 December 2018, QSC reported cash and cash equivalents of € 53.6 million, compared with € 61.9 million one year earlier.

## Net Asset Position

**46%**

**of capital expenditure is customer-related**

**Capital expenditure of € 17.2 million in 2018 financial year.** QSC invested a total of € 17.2 million in the past financial year, as against € 19.3 million in the previous year. Of this capital expenditure, 46% related to customer-related investments such as customer connections and associated hardware, 36% to technology and 18% to intangible assets such as licences. The purchase commitment for future capital expenditure amounted to € 3.1 million as of the balance sheet date (2017 balance sheet date: € 1.9 million).

**Depreciation and amortisation reduce value of long-term assets.** Within the consolidated balance sheet as of 31 December 2018, long-term assets decreased to € 166.6 million, down from € 174.9 million at the previous year's balance sheet date. This reduction was chiefly attributable to the depreciation of property, plant and equipment. Short-term assets fell to € 117.0 million, compared with € 122.2 million as of 31 December 2017. Here, the increase in trade receivables by € 3.8 million to € 56.1 million was negated by the reduction in cash and cash equivalents by € 8.3 million to € 53.6 million.

**Equity ratio rises to 32%.** Shareholders' equity showed a slight increase to € 90.2 million as of 31 December 2018, compared with € 89.5 million at the previous year's balance sheet date. This was due above all to changes in other reserves and the capital reserve. Given the lower volume of total assets as of 31 December 2018, the equity ratio rose by 2 percentage points to 32%. Long-term liabilities fell to € 109.3 million as of 31 December 2018, compared with € 147.9 million at the end of 2017. This line item mainly comprises the final tranches of the promissory bond, which amount to € 35.0 million and are due to mature in May 2021, as well as liabilities of € 65.0 million for the syndicated loan facility. As of 31 December 2017, the promissory note bond taken up in 2014 still dominated this line item with an amount of € 135.0 million.
Short-term liabilities increased from € 59.6 million as of 31 December 2017 to € 84.1 million as of 31 December 2018. There were two reasons for this: Firstly, trade payables and other liabilities rose to € 58.0 million, up from € 46.9 million at the previous year's balance sheet date. Secondly, other financial liabilities increased to € 20.0 million, as against € 1.6 million as of 31 December 2017. These comprise the fixed-interest tranches of the promissory note bond due to mature in May 2019.

# RISK REPORT

## Risk Management

**Risk management forms key foundation of sustainable business success.** Like all companies, QSC is permanently exposed to numerous potential risks. By consciously addressing and assessing these risks, the Company boosts its competitiveness and lays a key foundation for its sustainable business success. Professional risk management therefore has to ensure that all events, actions or neglected actions that could potentially pose a threat to QSC's success, or even to its continued existence, are already identified, analysed, assessed, managed and monitored at the earliest possible stage of their development. Risk management comprises coordinated procedures, measures and the necessary rules for dealing with risks. In many cases, risk management thus supports decision-making processes at QSC and all its subsidiaries.

## Organisation and Procedures

**Focus on material risks.** QSC has implemented a Company-wide uniform integrated risk management system (RMS) to ensure the effectiveness of its risk management and facilitate the aggregation of risks and transparent reporting. The use of a risk management software that has proven its worth enables the Company to classify risks precisely and, as a result, to clearly focus on material risks.

**Risk management system as integral component of decision-making processes**

The RMS is an integral component of decision-making processes. It ensures that risk assessments are considered in all decisions and that measures to reduce risks are taken at an early stage. Quarterly reports raise awareness of risk issues among all managers with relevant responsibility. Guidelines, procedures and work instructions are in place to flank the RMS and ensure its implementation in day-to-day operations. The risk analyses, such as those required for management systems under ISO 27001 (Information Security) or ISO 9001 (Quality Management), ensure uniform, efficient reporting.

The RMS covers all Company departments. Managers reporting directly to the Management Board (heads of department) continually monitor and assess the risks arising. Within the RMS framework, they act as risk coordinators and are responsible for making sure that the risks identified are always up to date. Heads of department report to Corporate Risk Management at least once a quarter. They also regularly check whether any new risks with material implications and previously undetected have arisen in their areas of responsibility and whether there is any need to amend the assessment of risks already identified. This process ensures that potential risks in the operating business can be detected at an early stage.

**Risk management responsible for risk reporting**

Corporate Risk Management is responsible for risk reporting to group management. It also serves as an interface to other audit and/or certification processes and ensures that, there too, the risks relevant to the Company are uniformly recorded. The Finance department is responsible for monitoring risks on the basis of key operating and financial performance figures.

**Corporate Risk Management acts as permanent point of contact.** Corporate Risk Management continuously monitors the introduction of and compliance with measures to avoid and reduce risks. It also acts as a permanent point of contact for all departments. Corporate Risk Management is responsible for consolidating and documenting the risks assessed by the risk coordinators. Based on the risk reports submitted by departments, it compiles a compact report (using the "R2C_RISK TO CHANCE" risk management software) and forwards this to the Management Board on a quarterly basis. The Management Board is informed immediately of any newly detected high risks. The Management Board informs the Supervisory Board with an extensive risk report at least once a year.
Risk Management Guidelines issued by the Management Board govern the approach to handling risks and define risk management processes and organisational structures. These guidelines are reviewed and modified as necessary on a regular basis, and at least once a year. In the context of the audit of the financial statements, the external auditors each year review whether the RMS is suitable for the early detection of any risks to the Company's continued existence.
Further information about the RMS in respect of IFRS 7 disclosure obligations for financial instruments can be found in the Notes to the Consolidated Financial Statements from Page 157 onwards.

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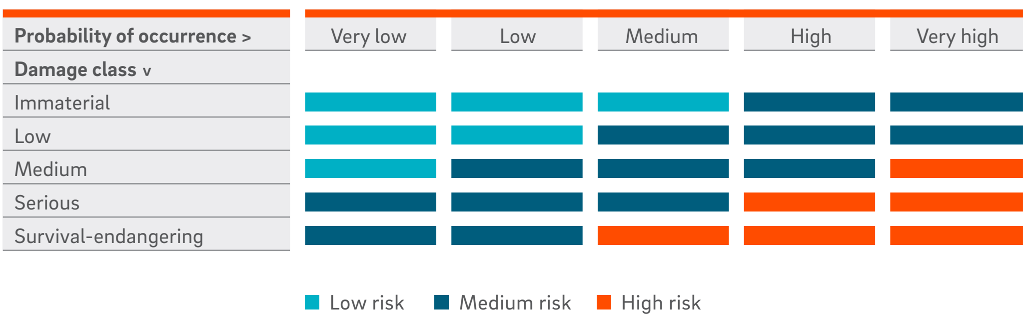
## Assessment Methodology

**Risks classification based on probability of occurrence and potential implications.** The risk management software supports the overall risk management process throughout the Company. The tool initially uses a gross view to classify a risk in terms of its probability of occurrence and potential implications. This means that the probability of occurrence and potential implications are assessed without accounting for any measures taken to minimise risks. For the highest implication category ("threat to continued existence"), severe financial damages have to be exacerbated by an actual or legal circumstance that would endanger QSC's continued existence. The classification of a risk as "low", "medium" or "high" is based on the combination of its probability of occurrence and damage class. The following diagram provides an overview of the methodology used to classify risks.

### Classification of risks




**Assessment of probability of occurrence**

| | |
|---|---|
| Very low: | Less than once in 5 years |
| Low: | Not more than once in 5 years |
| Medium: | Once a year on average |
| High: | More than once a year |
| Very high: | Once a quarter or more |

**Damage class (estimated damage in the event of occurrence)**

| | |
|---|---|
| Immaterial: | Under € 50,000 |
| Low: | € 50,000 to € 250,000 |
| Medium: | € 250,000 to € 1,000,000 |
| Serious: | Over € 1,000,000 |
| Survival-endangering: | As a result of legal or actual circumstances occurring |

General risks are analysed to assess whether and how these could specifically harm QSC. If this analysis concludes that relevant damages from such risks really are conceivable, then these risks are included as specific risks. General risks with no specific reference to the Company are otherwise not recorded in the RMS. General risks include developments such as global catastrophes, financial system collapse, war and terrorist attacks.
This risk analysis and classification is followed by measures aimed at dealing with and monitoring risks. These serve to reduce existing risks, to hedge risks with provisions and insurance coverage, where this is economically expedient, and to raise awareness of existing residual risks and/or risk acceptance.

**Net assessment of risks is key.** The risk is subsequently reassessed in terms of its probability of occurrence and scope of damages to account for the aforementioned measures (net view). The external risk report only includes those risks that still have to be deemed material for QSC's future business performance even after all risk reduction and avoidance measures have been factored in, i.e. subsequent to performance of the net analysis. Based on this classification,

these risks are categorised as “high risks”. A risk that is allocated to the “risk to continued existence” damage class, for example, is only assessed as constituting a “high risk” in the overall assessment if there is at least a “medium” probability of occurrence. Risks to the Company’s continued existence that are assessed as having a low probability of occurrence (“very low” or “low”) are therefore not classified as “high risks” for ongoing observation purposes and are not viewed overall as direct threats to the Company’s continued existence.
As a result of this risk analysis, in its external risk report QSC reports risks that are either individually material or aggregates individually immaterial risks in suitable risk categories (e.g. regulatory risks). The assessments and accompanying comments and requirements are only provided in quantitative terms in cases where quantitative assessment of the specific extent of damages is possible. As this is generally not the case, however, the relevant risks are usually classified in terms of classes of damage.

**Risks classified by damages class**

## Supplementary Disclosures Pursuant to § 315 (4) HGB

**Permanent monitoring of accounting risks.** Risk management in respect of financial reporting forms an integral component of the RMS. The risks involved in accounting and financial reporting are constantly monitored, with the results being factored into Group-wide reporting. Within the audit of the annual financial statements, the external auditor also reviews the financial reporting process. Based on the auditor’s findings, both the Supervisory Board Audit Committee and the full Supervisory Board deal with the internal control system in respect of the financial reporting process.

At QSC, the RMS is characterised by the following key features:

- QSC has a clear management and corporate structure. Accounting activities for subsidiaries are performed either by QSC AG itself on the basis of agency agreements or handled in close liaison with the subsidiaries. Individual process responsibility is clearly allocated at all subsidiaries.
- QSC ensures strict compliance with legal requirements and International Financial Reporting Standards (IFRS) by means of a range of measures including employing qualified specialists, providing targeted and ongoing training and development for these specialists, strictly observing the dual control principle by separating execution, billing and approval functions in organisational terms and clearly segregating duties for document creation and posting in its controlling department.
- QSC uniformly works with standard software from SAP throughout the Company.
- The accounting software is comprehensively protected against unauthorised access. It ensures that all major transactions at all companies are consistently, correctly and properly recorded.

- Once prepared, separate financial statements are transferred to a uniform consolidation system in which intercompany transactions are eliminated. This system then provides the basis for the consolidated financial statements and for major disclosures in the Notes to the Consolidated Financial Statements and the Group Management Report.
- Group-wide monthly reporting ensures the early detection of potential risks during the financial year.

With these measures, QSC creates the necessary transparency for its financial reporting and – to the greatest extent possible and despite the enormous complexity of IFRS – prevents any potential risks arising in this process.

## Individual Risks

**Focus on actual risk situation.** Risk monitoring focuses not so much on the risks identified by the gross assessment as on the actual risk situation after taking relevant measures into consideration. Based on this net perspective, the following relevant risks were assessed as “high”.

**Decline in revenues in conventional TC business.** Voice call volumes in the German fixed network are declining overall and the share of the open call-by-call and preselect businesses is also falling. Revenues have been additionally held back by tough price competition and regulation. In its business with resellers, QSC also works together with partners with a strong market presence. In some cases, these now have their own TC infrastructures which they may put to increasing use in future. In the ADSL business as well, there are several strong players in the resellers market with which QSC works together. Here too, the Company is exposed to tough price competition. Not only that, revenues are also falling due to higher demand for broadband and the resultant increase in the use of VDSL and cable connections.

**Dependency on TC steadily reduced for years now**

By expanding its IT and cloud business, QSC has been reducing its dependency on the conventional TC business for years now. Not only that, the Company has combated the risk of revenue losses in this line of business by acting early to build up a fully IP-based next generation network (NGN). At the same time, QSC has been reviewing whether and to what extent it can maintain its voice offerings on competitive terms following the potential expiry of further regulatory requirements. Irrespective of this, the Company expects the decline in revenues in the conventional TC market for private customers to continue in the years ahead as well, and for this to be accompanied by a further rise in pressure on margins.

Conversely, the amalgamation of voice and data networks on an IP basis offers new opportunities to optimise TC infrastructures and make them more flexible. Not only that, as the backbone for digitalisation TC is currently gaining noticeably in significance across the board. In view of this, QSC decided to strengthen its TC business by spinning it off to a subsidiary. This way, the Company intends to make better use of new opportunities arising in the market.

**Security.** Safeguarding IT security is one of the crucial success factors in QSC's business activity. Protecting company data and personal data relating to customers and employees with all suitable means available in technological and organisational terms is therefore an absolute focus of QSC's IT security strategy. The risk of external attacks in the form of DDoS, virus-based or Trojan horse attacks, for example, has increased in recent times. QSC counters such attacks by working with smart and economically efficient defence concepts.

**QSC uses smart and economical defence concepts**

**Dependency on business partners.** In its Telecommunications segment, QSC generates its reseller revenues with only a small number of large voice and DSL resellers. Losing one of these partners would noticeably reduce revenues at QSC. However, this would only impact to a lesser extent on its profitability, as these revenues mainly involve lower margins. A material share of revenues in the Outsourcing segment as well is generated with a small number of major customers. The loss of one of these customers would noticeably impact on the Company's revenues and profitability. QSC counters this risk above all by carefully maintaining the successful business relationships that have grown over the years.

**Lack of specialists and expertise.** Like all ICT providers, QSC needs qualified specialists to operate and further develop its product portfolio. Given the shortages, particularly of IT specialists, in the German labour market, it is sometimes difficult to find adequate replacements for the relevant positions within a short timeframe. This risk may be further exacerbated by employees resigning, particularly when this leaves the Company without the resources needed to maintain the same level of performance capacity or when the employees resigning have specialist expertise that cannot be replaced immediately. The shortage of specialist staff may result in bottlenecks in operations and the further development of existing and new IT and TC applications. QSC is countering this risk above all by consistently training young specialists, cooperating with select universities and offering a range of targeted retention measures for those specialists and executives who are especially important to the Company's operations.

## Overall Summary

**QSC is able to detect potential risks at an early stage and take appropriate action.** Taking due account of the potential scope of damages and probabilities of occurrences of these and other potential risks, no risks that could result in any permanent and significant impairment of the Company's financial position, financial performance or cash flows in the current financial year are currently discernible. In organisational terms, all meaningful and reasonable measures have been taken to enable the Company to detect potential risks at an early stage and take appropriate action. Due to these or other risks or to erroneous assumptions, QSC's future earnings may nevertheless materially deviate from the expectations of the Company and its management. All statements made in this Group Management Report that are not historical facts constitute forward-looking statements. They are based on current expectations and forecasts of future events and are regularly reviewed in a risk management context.

# OUTLOOK AND OPPORTUNITY REPORT

## Overall Summary

**Continuing high growth in Cloud business.** Based on an initial, cautious forecast, QSC expects to generate revenues of more than € 350 million, EBITDA of more than € 65 million and a positive free cash flow once again in the current financial year. The latter key figure will as a minimum reach a low single-digit million euro amount. The first-time application of the IFRS 16 (Leases) will significantly increase the volume of EBITDA reported. Based on its current assessment, QSC quantifies the effect of first-time application of this standard at between € 30 million and € 35 million. Furthermore, application of IFRS 16 will lead to higher liabilities which – as in the past – will not be included in net debt or in the free cash flow figure.

In terms of revenues, the Company expects the pace of growth in its Cloud segment to accelerate and has set a target of around € 50 million. This ongoing dynamism will nevertheless not yet suffice to offset the downturns in the traditional Outsourcing business – resulting from the loss already reported of two major customers – and the normalisation of the TC business with resellers.

**€ ~50**

**million revenue target for Cloud segment in 2019**

Irrespective of this, QSC is currently reviewing several strategic options for its TC business. These include the potential sale of a majority or all of Plusnet, its TC subsidiary, further developing the business independently or entering into cooperations. The Company aims to reach a decision about this no later than the end of May 2019 and will then update its cautious forecast in line with the strategic option selected.

## Future Macroeconomic and Industry Framework

**2.5% growth expected in German IT market.** The Federal Government has forecast growth of just 1.0% in gross domestic product for 2019, compared with 1.5% in 2018. The risks for the German economy are apparent from the reduction in the ifo Business Climate Index, with a substantial fall in expectations among participant companies at the beginning of 2019 in particular. The ICT sector too will be unable to escape the effects of this downturn. Having risen by 2% last year, ICT revenues are forecast by the Bitkom sector association to rise by just 1.5% to € 168.5 billion in the current year. The IT market, with forecast growth of 2.5%, is once again expected to outpace the TC market at 1.1%.

**Government only expects low GDP growth in 2019**

**The German IT market**
(€ billion)

**Cloud and IoT remain key growth drivers in IT market.** Within the IT market, cloud and IoT technologies are set to remain the main growth drivers. This is reflected by, among other sources, a survey performed at the end of 2018 by the eco Association of the Internet Industry. According to the findings, one of the most important trends within digitalisation is IT-as-a-Service, and here in particular multi-cloud approaches, cloud security and edge services, i.e. the networking of machines and appliances in the Internet of Things. The importance now accorded to IoT is underlined in the 2019 Internet of Things Study compiled by the market research company IDG. According to this, nearly 60% of the companies surveyed plan to increase their IoT investments either significantly or even very significantly in the years ahead. The key focus here is on cloud services, data security and smartification – the three areas covered by QSC and its IoT subsidiary Q-loud.

## Expected Financial Position, Financial Performance and Cash Flows

**Greater flexibility and agility thanks to vertical organisational structure**

**Decentralised sales create new momentum.** Since early 2018, a vertical organisational structure has boosted the autonomy of QSC's business fields. These are now themselves responsible for their own sales and technologies. The greater flexibility and agility resulting from this move have provided the business fields with the scope needed to further develop existing customer relationships and acquire new customers. This has particularly benefited the Cloud segment, where growth is expected to accelerate yet further in the current year. Put simply, two factors will prevent this momentum from increasing QSC's overall revenues in 2019. Firstly, two major Outsourcing customers have decided to work with another provider from the beginning of 2019. Secondly, the level of demand from TC resellers for international voice termination services is expected to normalise.
Due to the first-time application of IFRS 16, the volume of EBITDA reported will increase significantly in the current year. QSC expects to report EBITDA of more than € 65 million, as against € 35.4 million in the previous year. The effect resulting from first-time application of IFRS 16 is expected to amount to between € 30 million and € 35 million. Upon application of the standard, operating leases as used by QSC as well will require recognition for the first time in the lessee's balance sheet and will then be depreciated as with any other capital expenditure. All other factors remaining equal, this will lead to higher depreciation, with an equivalent reduction in operating expenses.

**QSC plans a positive free cash flow once again.** As in previous years, QSC expects to generate a positive free cash flow figure once again in 2019. Given its cash flow from operating activities and its existing liquidity, QSC is therefore solidly financed for the projects planned for the current financial year.

## Expected Earnings Performance by Segment

**Disparate developments in segments.** Highly dynamic developments in the Cloud business and a recovery in Consulting are expected to be countered in the current financial year by lower revenues in the two other segments. The following comments on the profitability of individual segments do not account for the effects of first-time application of IFRS 16.

**Accelerated growth in Cloud business.** QSC aims to generate revenues of around € 50 million in its Cloud segment in the current financial year, corresponding to growth of more than 35%. This represents a further acceleration in the dynamic growth in the Company's newest segment – Cloud revenues already grew by 31% in 2018. Both activities – Cloud Services and IoT – will make major contributions to this rapid growth. At Q-loud, QSC's IoT subsidiary, the numerous pilot projects implemented in recent years are expected to gradually evolve into larger-scale orders. Additional momentum will be provided by "home-grown" innovations, such as the NB-IoT Tracker and the QSC Energy Management Cockpit. Cloud Services will benefit on the one hand from the ongoing migration of existing Outsourcing customers. On the other hand, QSC will be acquiring new SME customers for this forward-looking business field. In the scalable Cloud business, higher revenues are accompanied by disproportionate earnings growth.

**Declining significance of traditional Outsourcing business.** As in previous years, cloud-based procurement models at existing customers will continue to gradually replace traditional outsourcing solutions. Furthermore, as previously reported two major contracts are due to expire. As a result of these factors, Outsourcing revenues will show a significant reduction once again in 2019. This being so, QSC is pressing ahead with reorganising its structures, while at the same time stepping up its efforts to acquire new SME customers for this business field. Irrespective of these developments, the organisational restructuring measures and persistently tough price competition mean that the segment margin will come under pressure. The segment contribution is therefore set to fall significantly.

**Consulting returns to growth course.** QSC expects to generate substantial revenue growth and a significant increase in the segment contribution in its Consulting business once again in the current financial year. This segment used its period of temporary weakness to optimise capacity levels among its own employees and to intensify its specialist training and development measures. As a result, Consulting is now well positioned to benefit from growing demand for SAP advisory services, particularly those relating to the use of HANA technology. Despite the ongoing personnel-intensive nature of these activities, the Consulting segment has once again budgeted a double-digit segment margin.

**Growing demand for SAP advisory services**

**Normalisation in TC business with resellers.** QSC benefited in 2018, and in the first half in particular, from a temporary surge in demand from resellers for international voice termination services. This demand is expected to normalise once again in the current financial year and settle down at the level seen in the second half of 2018. In its TC business with corporate customers, by contrast, QSC expects to see a slight increase in revenues. All in all, TC revenues in the current financial year are expected to fall short of the previous year's figure. The segment contribution is expected to decrease slightly.

**Slight revenue increase expected in TC business with corporate customers**

## Opportunity Management

**Dynamic market climate opens up ever new opportunities.** QSC is the digitaliser to the German SME sector and one of only few providers in Germany able to offer this target group all the services they need to enhance their IT for the digital age from a single source. The dynamic market climate is opening up ever new opportunities. Responsibility for identifying and acting on such opportunities lies with the business fields. They are familiar with their specific market environments and alert to any resulting potential. They also draw on the expertise to be found in sales, market and competition analyses and internal studies. The managers responsible report to the Management Board on existing opportunities. The Supervisory Board Strategy Committee also regularly deals with this issue.

Specific opportunities are factored into the rolling planning, with a review being performed at an early stage to ascertain the risks involved in pursuing and implementing these opportunities. Here, the benefits of dovetailing risk and opportunity management are especially clear. QSC reports below on the future developments and events that could lead to a positive variance from the full-year outlook for 2019 provided in this report. By analogy with risks, the Company classifies these as "large" opportunities with a comparatively high probability of occurrence and a substantially positive contribution to its financial position, financial performance and cash flows.

## Individual Opportunities

**Additional customers for cloud and outsourcing services.** QSC is continually expanding its cloud-based portfolio and is in talks with numerous potential corporate customers. Past experience shows that a substantial period of time generally passes between initial contacts with customers and the first revenues. To account for this, QSC usually budgets for only a moderate level of growth with new customers in its Cloud business. Actual demand could nevertheless exceed our expectations as, given enormous technological advances and the requirements of digital business models, the IT in place at many small and medium-sized companies is increasingly reaching its limits.

This situation is also giving rise to opportunities in the traditional Outsourcing business. After all, technological advances mean that many small and medium-sized companies feel obliged to make increasing use of services offered by providers when it comes to their IT operations, but do not yet fell ready to migrate all of their operations to a cloud-based infrastructure. QSC has restructured its Outsourcing sales activities in recent months and, on this basis, may acquire more customers than originally planned.

**More IoT projects in regular operation.** QSC acted very early to position itself with an extensive portfolio in the IoT market. In their cooperation with QSC, many SME players are still focusing on pilot projects. Should several of these projects be transferred to regular operations, then this might trigger an additional unexpected boost to revenues. This would also be the case if SME companies were to draw on QSC's extensive IoT expertise in the mass production of networked appliances to a greater extent than planned.

**Opportunities offered by rapid dissemination of IoT innovations**

Additional opportunities may arise in the event of the rapid dissemination of QSC's own innovations, such as the NB-IoT Tracker. For this kind of in-house development, QSC budgets only a very moderate volume of revenues for the market launch stage. In particular, the interest shown by large players in the market could make it possible to generate higher growth.

**Rapid implementation of new SAP solutions.** The technological advance currently underway at SAP from the ERP product family R/3 to S/4HANA will continue to drive growth in the Consulting segment in 2019 as well. As this new product family is a key to digitalising business models, demand for corresponding advisory services may possibly exceed expectations. The same is true for the support QSC provides to corporate customers in deploying the new SAP Leonardo development environment. Here, as for other SAP solutions, QSC has a wealth of mature in-house competence. In particular, by linking its IoT and SAP expertise the Company can provide SME companies with added value in a way that few other providers in the market are able to.

**Further development of Plusnet.** Having spun off its TC business to a standalone company, QSC is now pursuing several strategic options. One option involves the potential sale of a majority or all of Plusnet. Were this option to be implemented, QSC would have substantially greater financial funds at its disposal to boost its other business fields, and in particular its Cloud and IoT businesses. Another option involves entering into cooperations. Cooperating with suitable partners would create the opportunity for Plusnet to generate higher revenues than expected in the current financial year. Further development of the business on a standalone basis also harbours opportunities. These can be accessed, for example, by stepping up the company's cooperation with municipal utility companies and city carriers, as well as by acquiring further corporate customers.

# FINANCIAL REPORT

# CONSOLIDATED FINANCIAL STATEMENTS

## Consolidated Statement of Income

Euro amounts in thousands (€ 000s)

| | Note | 2018 | 2017 |
|---|---|---|---|
| **Net revenues** | 6 | **366,843** | **357,867** |
| Cost of revenues | 7 | (298,821) | (291,059) |
| **Gross profit** | | **68,022** | **66,808** |
| Sales and marketing expenses | 8 | (29,678) | (28,546) |
| General and administrative expenses | 9 | (30,893) | (30,739) |
| Other operating income | 11 | 2,164 | 2,484 |
| Other operating expenses | 11 | (1,140) | (2,898) |
| **Operating profit (EBIT)** | | **8,475** | **7,109** |
| Financial income | 12 | 138 | 247 |
| Financial expenses | 12 | (4,504) | (4,658) |
| **Net income before income taxes** | | **4,109** | **2,698** |
| Income taxes | 38 | (833) | 2,425 |
| **Net income** | | **3,276** | **5,123** |
| **Attribution of net income** | | | |
| Owners of the parent company | | 3,518 | 5,336 |
| Non-controlling interests | | (242) | (213) |
| Earnings per share (basic) in € | 13 | 0.03 | 0.04 |
| Earnings per share (diluted) in € | 13 | 0.03 | 0.04 |

## Consolidated Statement of Comprehensive Income

Euro amounts in thousands (€ 000s)

| | 2018 | 2017 |
|---|---|---|
| **Net income for the period** | **3,276** | **5,123** |
| **Other comprehensive income** | | |
| **Line items that are not reclassified in the income statement** | | |
| Actuarial gains (losses) from defined benefit pension plans | 42 | 848 |
| Tax effect | (11) | (275) |
| **Line items that are not reclassified in the income statement** | **31** | **573** |
| **Line items that might subsequently be reclassified** | | |
| **in the income statement** | | |
| Fair value measurement of cash flow hedge | 1,063 | 945 |
| Tax effect | (344) | (306) |
| **Line items that might subsequently be reclassified** | | |
| **in the income statement** | **719** | **639** |
| **Total fair value changes (net of tax) recognised directly** | **750** | **1,212** |
| **Total comprehensive income for the period** | **4,026** | **6,335** |
| **Attribution of total comprehensive income** | | |
| Owners of the parent company | 4,268 | 6,548 |
| Non-controlling interests | (242) | (213) |

## Consolidated Balance Sheet

Euro amounts in thousands (€ 000s)

| | Note | 31 Dec. 2018 | 31 Dec. 2017 |
|---|---|---|---|
| **ASSETS** | | | |
| **Long-term assets** | | | |
| Property, plant and equipment | 15 | 50,211 | 57,481 |
| Land and buildings | 15 | 22,291 | 23,528 |
| Goodwill | 16 | 55,568 | 55,568 |
| Other intangible assets | 17 | 24,411 | 25,349 |
| Trade receivables | 18 | 1,953 | 2,461 |
| Prepayments | 19 | 3,353 | 2,549 |
| Other long-term assets | | 430 | 156 |
| Deferred tax assets | 38 | 8,417 | 7,806 |
| **Long-term assets** | | **166,634** | **174,898** |
| **Short-term assets** | | | |
| Trade receivables | 18 | 56,057 | 52,278 |
| Prepayments | 19 | 5,657 | 6,809 |
| Inventories | 20 | 670 | 649 |
| Other short-term assets | 21 | 959 | 569 |
| Cash and cash equivalents | 22 | 53,618 | 61,881 |
| **Short-term assets** | | **116,961** | **122,186** |
| **TOTAL ASSETS** | | **283,595** | **297,084** |

| | Note | 31 Dec. 2018 | 31 Dec. 2017 |
|---|---|---|---|
| **SHAREHOLDERS' EQUITY AND LIABILITIES** | | | |
| **Shareholders' equity** | | | |
| Issued capital | 23 | 124,172 | 124,172 |
| Capital surplus | 24 | 144,119 | 143,787 |
| Other capital reserves | 26 | (1,531) | (2,281) |
| Accumulated deficit | | (175,819) | (175,612) |
| **Equity attributable to owners of the parent company** | | **90,941** | **90,066** |
| Non-controlling interests | | (780) | (538) |
| **Shareholders' equity** | | **90,161** | **89,528** |
| **Liabilities** | | | |
| **Long-term liabilities** | | | |
| Other financial liabilities | 27 | 100,036 | 135,244 |
| Accrued pensions | 28 | 5,545 | 5,924 |
| Other provisions | 29 | 2,922 | 3,031 |
| Trade payables and other liabilities | 30 | 454 | 3,357 |
| Deferred tax liabilities | 38 | 352 | 392 |
| **Long-term liabilities** | | **109,309** | **147,948** |
| **Short-term liabilities** | | | |
| Trade payables and other liabilities | 30 | 58,042 | 46,896 |
| Other financial liabilities | 27 | 20,013 | 1,577 |
| Other provisions | 29 | 2,655 | 7,388 |
| Accrued taxes | 29 | 1,631 | 1,669 |
| Deferred income | 31 | 1,784 | 2,078 |
| **Short-term liabilities** | | **84,125** | **59,608** |
| **Liabilities** | | **193,434** | **207,556** |
| **TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES** | | **283,595** | **297,084** |

## Consolidated Statement of Changes in Equity

Euro amounts in thousands (€ 000s)

| | | Equity attributable to equity holders of QSC AG | | | |
|---|---|---|---|---|---|
| | | | | Other capital reserves | |
| | Note | Issued capital | Capital surplus | Actuarial gains (losses) | Cash flow hedge reserve |
| **Balance as of 1 January 2018** | | **124,172** | **143,787** | **(1,350)** | **(931)** |
| Net income for the period | | - | - | - | - |
| Other comprehensive income for the period, net of tax | 26 | - | - | 31 | 719 |
| **Total comprehensive income** | | **-** | **-** | **31** | **719** |
| Dividends | | - | - | - | - |
| Non-cash share-based compensation | 36 | - | 332 | - | - |
| **Balance as of 31 December 2018** | | **124,172** | **144,119** | **(1,319)** | **(212)** |
| **Balance as of 1 January 2017** | | **124,172** | **143,217** | **(1,923)** | **(1,570)** |
| Net income for the period | | - | - | - | - |
| Other comprehensive income for the period, net of tax | 26 | - | - | 573 | 639 |
| **Total comprehensive income** | | **-** | **-** | **573** | **639** |
| Dividends | | - | - | - | - |
| Non-cash share-based compensation | 36 | - | 570 | - | - |
| **Balance as of 31 December 2017** | | **124,172** | **143,787** | **(1,350)** | **(931)** |

| Accumulated deficit | Total | Non-controlling interests | Total equity | |
|---|---|---|---|---|
| **(175,612)** | **90,066** | **(538)** | **89,528** | **Balance as of 1 January 2018** |
| 3,518 | 3,518 | (242) | 3,276 | Net income for the period |
| - | 750 | - | 750 | Other comprehensive income for the period, net of tax |
| **3,518** | **4,268** | **(242)** | **4,026** | **Total comprehensive income** |
| (3,725) | (3,725) | - | (3,725) | Dividends |
| - | 332 | - | 332 | Non-cash share-based compensation |
| **(175,819)** | **90,941** | **(780)** | **90,161** | **Balance as of 31 December 2018** |
| **(177,223)** | **86,673** | **(325)** | **86,348** | **Balance as of 1 January 2017** |
| 5,336 | 5,336 | (213) | 5,123 | Net income for the period |
| - | 1,212 | - | 1,212 | Other comprehensive income for the period, net of tax |
| **5,336** | **6,548** | **(213)** | **6,335** | **Total comprehensive income** |
| (3,725) | (3,725) | - | (3,725) | Dividends |
| - | 570 | - | 570 | Non-cash share-based compensation |
| **(175,612)** | **90,066** | **(538)** | **89,528** | **Balance as of 31 December 2017** |

## Consolidated Statement of Cash Flows

Euro amounts in thousands (€ 000s)

| | Note | 2018 | 2017 |
|---|---|---|---|
| **Cash flow from operating activities** | 32 | | |
| Net income before income taxes | | 4,109 | 2,698 |
| Depreciation, amortisation and impairment of long-term assets | 10, 15, 17 | 26,587 | 30,578 |
| Other non-cash income and expenses | | 828 | 716 |
| Gains (loss) from disposal of long-term assets | | (26) | 13 |
| Income tax paid | | (1,889) | (4,572) |
| Income tax received | | 10 | 4,091 |
| Interest received | | 92 | 850 |
| Net financial expenses | | 4,365 | 4,411 |
| Changes in provisions | 28, 29 | (6,698) | (5,737) |
| Changes in trade receivables | 18 | (3,767) | (6,634) |
| Changes in trade payables | 30 | 9,832 | 12,201 |
| Changes in other assets and liabilities | | 682 | 682 |
| **Cash flow from operating activities** | 32 | **34,125** | **39,297** |
| **Cash flow from investing activities** | 33 | | |
| Purchase of intangible assets | | (8,354) | (6,417) |
| Purchase of property, plant and equipment | | (9,439) | (14,990) |
| Proceeds from sale of property, plant and equipment | | 92 | 38 |
| Proceeds from sale of a subsidiary, | | | |
| less liquid funds thereby disposed of | | - | (430) |
| **Cash flow from investing activities** | 33 | **(17,701)** | **(21,799)** |
| **Cash flow from financing activities** | 33 | | |
| Dividends paid | 23 | (3,725) | (3,725) |
| Repayment (issuance) of convertible bonds | 27 | (2) | 5 |
| Taking up of loans | 27 | 65,000 | - |
| Repayment of loans | 27 | (81,412) | (12,820) |
| Interest paid | | (4,253) | (5,507) |
| Repayment of liabilities under financing | | | |
| and finance lease arrangements | 27 | (295) | (1,351) |
| **Cash flow from financing activities** | 33 | **(24,687)** | **(23,398)** |
| **Change in cash and cash equivalents** | | **(8,263)** | **(5,900)** |
| Cash and cash equivalents as of 1 January | | 61,881 | 67,781 |
| **Cash and cash equivalents as of 31 December** | 22 | **53,618** | **61,881** |

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE 2018 FINANCIAL YEAR

## Company Information

QSC AG is digitalising the German SME sector. With decades of experience and expertise in its Cloud, Internet of Things, Consulting, Telecommunications and Colocation businesses, QSC accompanies its customers securely into the digital age. The cloud-based provision of all services offers increased speed, flexibility, and availability. The Company's TÜV and ISO-certified data centres in Germany and its nationwide All-IP network form the basis for maximum end-to-end quality and security. QSC's customers benefit from one-stop innovative products and services that are marketed both directly and via partners.
QSC is a stock corporation registered in the Federal Republic of Germany. Its legal domicile is Mathias-Brüggen-Strasse 55, 50829 Cologne, Germany. The Company is registered in the Commercial Register of the Cologne District Court under number HRB 28281. QSC has been listed on the Deutsche Börse stock exchange since 19 April 2000 and in the Prime Standard since the beginning of 2003.

## Accounting Policies

### 1 BASIS OF PREPARATION

Pursuant to Article 4 of Regulation (EC) No. 1606 / 2002 of the European Parliament and the Council dated 19 July 2002, the Company is required to prepare consolidated financial statements in accordance with International Financial Reporting Standards (IFRS). Pursuant to § 315e (1) of the German Commercial Code (HGB), it is thus exempted from preparing consolidated financial statements in accordance with HGB.
QSC prepares its consolidated financial statements in accordance with the IFRSs issued by the International Accounting Standards Board (IASB) that require application in the EU as of 31 December 2018, as well as with the supplementary requirements of § 315e (1) HGB. The Company took due account of all IFRSs requiring mandatory application in the EU in the 2018 financial year, as well as of the interpretations of the International Financial Reporting Interpretations Committee (IFRIC) and the Standing Interpretations Committee (SIC).
In its consolidated financial statements, QSC generally makes application of the cost method. Material exceptions relate to financial instruments recognised at fair value. Liabilities for share-based payments in the form of equity instruments and the net liability for defined benefit pension plans are also recognised at fair value.
The financial year of QSC AG and its subsidiaries included in consolidation (hereinafter also referred to as "QSC") corresponds to the calendar year. The consolidated financial statements are presented in euros. All amounts, unless otherwise stated, are rounded up or down to the nearest thousand euro amount (€ 000s). The rounding up or down of figures may result in minor discrepancies on a scale of € 1k or 0.1% between numbers and percentages in this Annual Report.

No events or transactions which would have a material effect on the Group's financial position, financial performance or cash flows occurred between the end of the reporting period and 20 March 2019 (the date on which the consolidated financial statements were approved by the Management Board for submission to the Supervisory Board).
The consolidated income statement has been prepared using the cost-of-sales method. In the interests of clarity and informational value, individual line items have been aggregated in the income statement and balance sheet. These line items are reported and commented on separately in the notes.

## 2 CONSOLIDATION

The consolidated financial statements comprise the financial statements of QSC AG and its subsidiaries as of 31 December of each financial year. The financial statements of subsidiaries included in consolidation have been prepared on the basis of uniform accounting policies pursuant to IFRS 10 (Consolidated Financial Statements). All subsidiaries have the same balance sheet date as the parent company QSC AG.
All intragroup transactions and balances are eliminated in full. Subsidiaries are fully consolidated from the date of acquisition, i.e. the date on which QSC obtains control. Inclusion by way of full consolidation ends upon the parent company no longer exercising control. Information on the companies included in the consolidated financial statements is provided in Note 34.
Non-controlling interests are measured upon acquisition at their respective share of identifiable net assets at the company thereby acquired. Changes in the level of shareholding held by the Company in a subsidiary that do not lead to a loss of control are recognised as equity transactions.

## 3 SIGNIFICANT JUDGEMENTS AND ESTIMATES

The application of accounting policies requires the use of judgements as well as of forward-looking assumptions and estimates. Actual outcomes may differ from those assumptions and estimates. Significant adjustments to the carrying amounts of assets and liabilities may therefore be required within the coming financial year. The use of judgements, assumptions and estimates was required in particular for the accounting treatment of the following items:

**(a) Judgements made when applying accounting policies which could have the most material impact on the amounts recognised in the consolidated financial statements relate to the following items:**

**Recognition of Telecommunications business unit.** As already communicated in the ad-hoc release dated 18 September 2018, QSC is holding talks with suitable interested parties concerning the potential sale of a majority stake in Plusnet GmbH or of the company in its entirety. A review performed by the Management Board as of the reporting date on 31 December 2018 concluded that the conditions for applying IFRS 5 were not met as of the balance sheet date.

**Leases.** QSC determines whether an arrangement is or contains a lease on the basis of the economic substance of the arrangement at the inception date. Discretion is used in determining whether an arrangement grants rights to use an asset and the extent to which fulfilment of the contractual agreement depends on the use of one or more specific assets. As of 31 December 2018, lease liabilities totalled € 76k (2017: € 371k).

**Factoring.** Within a factoring agreement with NORD/LB Luxembourg S.A. Covered Bond Bank, QSC regularly sells certain short-term trade receivables with a total volume of up to € 18.5 million to the bank. A discretionary decision has to be made concerning the scope of existing risk thereby transferred. Assuming continuing involvement, QSC has recognised receivables of € 236k (2017: € 158k).

**(b) Assumptions and estimates mainly relate to the following items:**

**Impairment of non-financial assets.** At each reporting date, QSC assesses whether there are any indications of impairment for non-financial assets.
It tests goodwill for impairment at least annually and whenever there are indications of such. Impairment is determined by calculating the recoverable amount for the groups of cash-generating units (CGUs). This corresponds to the present value of the expected future cash flows at these units. The groups of CGUs correspond to the reporting segments. Should the recoverable amount of the CGUs fall short of the carrying amount of these units, then impairment losses are recognised. Goodwill of € 55,568k was recognised as of 31 December 2018 (2017: € 55,568k). Further details can be found in Note 16.
Furthermore, customer bases acquired in return for payment are also tested for impairment upon any indication of such. Their value is determined using the multi-period excess earnings method. Customer bases of € 13,910k were recognised as of 31 December 2018 (2017: € 15,965k). Further details can be found in Note 17.

**Deferred tax assets.** QSC recognises deferred tax assets for all temporary differences and for all unused tax losses to the extent that it is probable that taxable income will be available in future against which the tax loss carryovers can be utilised.
Estimates by management are required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of future taxable income together with underlying tax planning strategies. As of 31 December 2018, corporate income tax loss carryovers at QSC AG and all subsidiaries included in the consolidated financial statements totalled € 520 million (2017: € 523 million), while trade tax loss carryovers came to € 508 million (2017: € 510 million). Deferred tax assets of € 8,417k (2017: € 7,806k) and deferred tax liabilities of € 352k (2017: € 392k) were recognised as of 31 December 2018. Further details can be found in Note 38.

**Trade receivables.** QSC recognises trade receivables in the balance sheet net of allowances. Allowances for doubtful debts are measured on the basis of regular reviews and assessments performed in conjunction with credit monitoring. The assumptions concerning future payment behaviour and customer creditworthiness are subject to significant uncertainties. As of 31 December 2018, trade receivables came to € 58,010k (2017: € 54,739k). Further details can be found in Note 18.

**Provisions.** A provision is recognised when QSC has a legal or constructive obligation as a result of a past event, when it is likely that an outflow of resources embodying economic benefits will be required to settle such an obligation, and when the amount of the obligation can be reliably estimated.
Such estimates are subject to material uncertainties in terms of the timing and level of the obligation. As of 31 December 2018, other provisions and tax provisions totalling € 7,208k (2017: € 12,088k) were recognised in the balance sheet. Further details can be found in Note 29.
With regard to company pensions, individual commitments have been made that constitute defined benefit obligations. Pension provisions are measured using the projected unit credit method prescribed by IAS 19 for defined benefit plans and determined on the basis of actuarial surveys. Actuarial gains or losses are directly charged or credited to equity and thus recognised in other comprehensive income. Further details, particularly concerning the parameters selected, can be found in Note 28.

## 4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Revenue and expense recognition.** QSC recognises revenues upon satisfaction of the respective performance obligation by transfer of the promised good or promised service to the customer. The asset counts as transferred when the customer gains control over it. Furthermore, the following criteria have to be met for revenues to be recognised:

- Revenues from services are recognised when the services have been provided.
- QSC defers income from the installation of customer lines on a time-apportioned basis over a contractual period of 24 months (standardised contractual term). Related expenses are capitalised and deferred accordingly.
- Government grants are recognised as other operating income over the periods in which QSC expenses those costs the grants are intended to compensate.
- QSC recognises interest income when it arises using the effective interest method (i.e. the rate that discounts estimated future cash flows over the expected life of the financial instrument to its net carrying amount). Interest unwound on finance lease receivables from multiple element arrangements is also presented as interest income.
- Multiple element arrangements consist of a service portion and a hardware lease, where the fair values of the two components are separable and can be reliably determined. Application of IFRIC 4 requirements to hardware leases means that QSC functions as lessor in certain

multiple element arrangements. The lease agreements relate to identifiable assets usable exclusively by the customer. Revenues for services performed under the service contract are distributed pro rata over the contractual period. For the portion of the multiple element arrangement classified as a finance lease, the revenues are recognized upon inception of the arrangement and the interest portion is recognized over the term of such.
In these cases, amounts owed by customers (lessees) under a finance lease are recognised as discounted receivables. When measuring hardware leases as operating leases, the revenues are recognized on a monthly basis in accordance with the contractual terms. The total contractual performance is apportioned to the respective components using the residual value method.

- Operating expenses are recognised when the performance has been utilised or at the time they are incurred.

Specifically, QSC structures its revenue recognition as follows:

The **Cloud segment** includes all Cloud Services and all activities relating to the Internet of Things (IoT). QSC recognises revenues here in line with the services performed and thus basically on a time-apportioned basis over the contract term. Furthermore, this segment generates revenues from sales of hardware and software.

The **Outsourcing segment** primarily entails the provision of IT and data storage services for companies, as well as related hardware sales. It also involves IP-VPN networking for Outsourcing customers. QSC recognises revenues for IT services in line with the services performed, i.e. basically on a time-apportioned basis over the contract term.
Revenues from sales of hardware and from rental and lease transactions viewed as sales in terms of their economic substance are recognised upon shipment of the hardware to the customer, provided that QSC does not have any unsatisfied obligations impacting on final acceptance by the customer. All costs resulting from these obligations are recognised upon recognition of the corresponding revenues. Revenues from rental and lease transactions not viewed as sales in terms of their economic substance are recognised on a straight-line basis over the lease term.

In its **Consulting segment**, QSC advises companies on optimising their business processes, with a key focus on SAP-based technologies. Revenues from the respective service contracts are recognised in line with the services performed, i.e. basically on a time-apportioned basis over the contract term. Revenues from contracts for services charged in line with time inputs are recognised upon performance of the working hours and at the contractually agreed hourly rates.

The **Telecommunications segment** offers a broad portfolio of voice and data services. Furthermore, QSC operates the networks of third-party providers, including all network-related services and all aspects of product and customer management. Revenues are recognised upon performance of the agreed services. The services thereby performed refer either to use by the customer (telephone minutes/units consumed), the passage of time or other agreed tariff models.

**Foreign currency translation.** QSC presents its consolidated financial statements in euros. Transactions in currencies other than the euro are initially recognised using the spot exchange rate on the transaction date. Differences arising from changes in the exchange rate between the transaction date and the settlement or balance sheet date are recognised by QSC through profit or loss.

**Property, plant and equipment.** QSC recognises property, plant and equipment at cost less accumulated depreciation and impairment losses. Repair and maintenance expenses that do not constitute material replacement investments are directly expensed in the period in which they are incurred. The estimated useful lives of assets are taken as the basis for applying straight-line depreciation.
Any excess in the carrying amount of an asset over its respective recoverable amount is recognised through profit or loss as an impairment loss. Property, plant and equipment are subject to straight-line depreciation over the following expected useful lives:

| | Useful life in years |
|---|---|
| **Property, plant and equipment** | |
| Building | 8–33 |
| Networks and technical equipment | 2–27 |
| Installations on third-party land | 4–20 |
| Plant and operating equipment | 3–15 |

**Borrowing costs.** Borrowing costs are recognised as an expense in the period in which they are incurred. There are no qualifying assets as defined in IAS 23.

**Business combinations and goodwill.** QSC accounts for business combinations using the acquisition method. This involves recognising all identifiable assets, liabilities and contingent liabilities of the acquired business at fair value. Goodwill arising in a business combination is initially measured at the amount by which the Company's interest in the fair value of the identifiable assets, liabilities and contingent liabilities exceeds the cost of the business combination.
QSC tests goodwill for impairment at least once a year and upon any indication that the carrying amount is potentially impaired.

**Other intangible assets.** Intangible assets are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination corresponds to their fair value as of the date of acquisition. Internally generated intangible assets are capitalised if the IAS 38 recognition criteria are met. The costs involved relate primarily to personnel and materials. Costs not eligible for capitalisation are recognised through profit or loss in the period in which they arise. An assessment is made initially as to whether the useful lives of intangible assets are finite or indefinite. Intangible assets with finite lives are subject to straight-line amortisation over their useful

economic lives and tested for impairment whenever there is any indication of such. For assets with finite useful lives, the amortisation period and method are reviewed at least at the end of each financial year.
Other intangible assets primarily include software, licences and similar rights as well as non-recurring provisioning costs for activating customer connections. Moreover, brands and customer bases have been recognised as assets in conjunction with initial consolidations.
Any excess in the carrying amount of an asset over its respective recoverable amount is recognised through profit or loss as an impairment loss.
Licences are amortised over periods of up to 10 years and software over periods of 2 to 5 years. Non-recurring provisioning costs for activating customer connections are amortised over an average customer contract term of 24 months. Internally generated intangible assets (development costs) are amortised after completion of the development phase over a period of 3 to 5 years. Acquired brands are written down over periods of 2 to 10 years.
The useful lives of intangible assets identified in the business combinations with IP Partner AG and INFO AG in 2011 are 10 to 20 years for customer bases.

**Financial assets.** QSC measures financial assets falling within the scope of IFRS 9 at cost, at fair value through other comprehensive income (FVOCI) or at fair value through profit or loss (FVTPL). QSC determines the classification of its financial assets upon initial recognition and tests this designation at the end of each financial year. Items are reclassified where permitted and necessary. Upon initial recognition, QSC measures financial assets at fair value. The Company accounts for all regular way purchases and sales of financial assets on the basis of the trade date, i.e. the date on which it committed to purchasing or selling the asset. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the period established by regulation or convention in the marketplace.
QSC measures loans and receivables with fixed or determinable payments that are not quoted in an active market at amortised cost using the effective interest method and net of impairment losses. Gains and losses are recognised through profit or loss when the loans and receivables are derecognised or impaired, as well as through the amortisation process.
Payment due notices are sent out immediately when receivables become overdue. When any receivable is overdue by 180 days, this is deemed to represent objective evidence of increased default risk requiring the receivable to be tested for impairment, i.e. all receivables overdue by more than 180 days are individually tested for impairment.
Other assets in the form of reinsurance claims on life insurance policies, which are not classified as plan assets pursuant to IAS 19, are measured on the basis of the actuarial coverage reserves determined by the relevant insurance company. All other assets are recognised at their nominal values and, in line with their terms, are presented in the balance sheet as “Long-term assets” and “Short-term assets”.

**Contract assets.** Contract assets are accounted for in accordance with IFRS 15. This involves recognising the costs incurred to obtain and perform the contract and writing these down over the contract term. If the costs exceed the expected revenue, the resultant loss is recognised immediately as an expense.

**Prepayments.** Transitory items involving outlays prior to the balance sheet date and relating to a specified period after the balance sheet date are recognised as prepayments.

**Inventories.** QSC initially measures inventories at cost. As of the balance sheet date, goods for resale are stated at the lower of cost and net realisable value.

**Cash and cash equivalents.** Cash and cash equivalents reported in the balance sheet and statement of cash flows comprise cash on hand, cash at banks, and short-term deposits with original maturities of three months or less.

**Provisions.** A provision is recognised when QSC has a legal or constructive obligation as a result of a past event, when it is likely that an outflow of resources embodying economic benefits will be required to settle such an obligation, and when the amount of obligation can be reliably estimated. Where QSC expects some or all of a recognised provision to be reimbursed, the reimbursement is recognised as a separate asset if the reimbursement is virtually certain. The expense for allocations to the provision is recognised in the income statement net of any reimbursement.

- **Dismantling obligations.** Provisions are recognised to cover the obligation to dismantle central office collocations upon expiry of the expected lease term.

- **Severance payments.** Provisions are recognised for any existing legal or constructive obligations to grant severance payments to employees in connection with the termination of employment.

- **Restructuring measures.** A provision for restructuring measures is recognised as soon as QSC has approved a detailed and formal restructuring plan and the respective measures have either begun or been publicly announced.

**Pensions.** The obligations for defined benefit plans are determined separately for each plan using the projected unit credit method and on the basis of actuarial surveys.
Actuarial gains and losses are recognised under other reserves within other comprehensive income. The assumptions used by the Company to measure actuarial obligations are described in Note 28. Obligations for contributions to defined contribution plans are expensed as soon as the associated work has been performed.

**Stock option plans.** QSC's employees may receive share-based compensation in the form of equity instruments in return for work performed. QSC measures the expense of issuing such equity instruments on the basis of the fair value of the equity instrument at the grant or provision date (based on the stock option plans resolved or modified after 7 November 2002) and uses an appropriate option price model. Further details can be found in Note 36. The expense recognised for granting equity instruments and the corresponding increase in equity are spread over the vesting period of the options.

QSC does not recognise any expense for compensation entitlements which cannot be exercised. If the terms and conditions of an equity-based compensation agreement are modified, QSC recognises as a minimum the level of expense that would have arisen in the absence of such modification. If an equity-based compensation agreement is cancelled, QSC accounts for the agreement as if it had been exercised on the cancellation date and recognises the previously unrecognised expense immediately.

**Leases.** QSC determines whether an arrangement is or contains a lease on the basis of the economic substance of the arrangement at the inception date.

- **QSC as lessee.** In accordance with IAS 17, items attributable to QSC as their economic owner are recognised as assets and depreciated over their customary useful lives or over the lease term if shorter. The obligation arising from the lease arrangement is recognised as a liability and reduced over the lease period by the capital portion of the lease payments. Contracts classified as finance leases primarily relate to arrangements for IT hardware and data centre technology. Leased assets are measured at their fair value or, if lower, at the present value of the minimum lease payments during the non-cancellable period of the lease. In the case of finance lease arrangements, the payments are divided into their constituent elements of financing expense and capital repayment using the effective interest method and in such a way that the remaining carrying amount of the lease obligation is subject to a consistent interest rate. Financing expenses are charged to income. QSC's finance leases have remaining terms of less than one year.
  QSC classifies lease arrangements which do not transfer substantially all the risks and rewards incidental to ownership to the lessee as operating leases. Operating lease payments are recognised as an expense in the income statement on a straight-line basis over the lease term.

- **QSC as lessor.** Based on the requirements of IFRIC 4, QSC acts as the lessor in certain multiple element arrangements. The standard customer contract is then divided into a service contract for services to be rendered and a sale transaction for the leased hardware.
  For finance leases, the leasing component is recognised as a discounted receivable within "Trade receivables", while the revenues from the sale transaction are recognised in full in the year in which the contract is concluded. Customer payments on the leasing component are divided into principal and interest portions and recognised accordingly. Service revenues are recognised on a time-apportioned basis over the contract term. Operating lease income is recognised as income through profit or loss on a straight-line basis over the lease term.

**Financial liabilities.** QSC measures all interest-bearing loans on initial recognition at fair value, less directly attributable transaction costs. Subsequent measurement is based on amortised cost using the effective interest method. Gains and losses are recognised in the income statement when the liabilities are derecognised as well.

**Derivative financial instruments.** QSC has since 2014 been party to derivative financial instruments in the form of interest rate swaps which are used to hedge the risk of fluctuations in interest payments.
Derivative financial instruments are recognised initially at the contract date and measured both then and at the end of subsequent reporting periods at their fair value. Positive and negative fair values are reported as assets and other financial liabilities respectively. The fair value of interest-rate derivatives is determined on the basis of present value models, taking account of relevant market information (interest rate curves).
Where derivatives are used to hedge cash flow risks (cash flow hedges), the hedge relationship is documented and its effectiveness measured at each reporting date. The change in the fair value of the hedge instrument attributable to its effective portion is recognised in the statement of comprehensive income as a change in value charged or credited to equity. The ineffective portion of the hedge relationship is recognised through profit or loss. Amounts recognised in the cash flow hedge reserve are reclassified to the income statement in the period in which the underlying hedged transaction influences earnings.

**Deferred income.** QSC defers one-time income from the installation of customer lines on a time-apportioned basis over a contractual period of 24 months.

**Taxes.** QSC recognises current income tax assets and liabilities for current and prior periods at the amount expected to be reimbursed by or paid to the tax authorities. To calculate this, QSC uses the tax rates and tax laws applicable to the relevant assessment period. Current income taxes relating to items recognised directly in equity are also recognised in equity.
Deferred taxes are recognised using the liability method on temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. QSC recognises deferred tax liabilities for all taxable temporary differences, except:

- where the deferred tax liability arises from the initial recognition of goodwill
- where the deferred tax liability arises from the initial recognition of an asset or liability in a transaction that is not a business combination and that at the time of the transaction affects neither the accounting profit nor taxable profit or loss; and
- where the deferred tax liability arises from taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

QSC recognises deferred tax assets for all deductible temporary differences and unused tax loss carryovers to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, tax loss carryovers not yet used and tax credits can be utilised except:

- where the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and that at the time of the transaction affects neither the reported result for the period nor taxable profit or loss; and
- where the deferred tax asset relates to deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, if it is probable that the temporary differences will not reverse in the foreseeable future and insufficient taxable profit will be available against which the temporary differences can be utilised.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Previously unrecognised deferred tax assets are also reassessed at each balance sheet date and recognised to the extent that it has become probable that future taxable income will allow the deferred tax asset to be recovered.
QSC measures deferred tax assets and liabilities at the tax rates expected to apply to the year when the asset is realised or the liability settled based on tax rates and tax laws that have been enacted as of the balance sheet date. Future changes in tax rates have to be accounted for if enacted or substantively enacted by the end of the reporting period.
Deferred taxes in connection with items recognised directly in equity in other comprehensive income are likewise recognised directly in equity (through OCI) and not through profit or loss.
Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred tax assets and deferred tax liabilities relate to taxes on income at the same taxable entity and due to the same tax authority.

## 5 CHANGES IN ACCOUNTING POLICIES

The following amendments to accounting standards required first-time application in the 2018 financial year. The amendments and their implications for QSC's consolidated financial statements are presented below.

| Standard / interpretation | Title of standard / interpretation or amendment | Effective date[1] |
|---|---|---|
| IFRS 9 | Financial Instruments | 1 Jan. 2018 |
| IFRS 15 | Revenue from Contracts with Customers | 1 Jan. 2018 |
| Amendments to IFRS 2 | Classification and Measurement of Share-based Payment Transactions | 1 Jan. 2019 |
| Amendment to IFRS 15 | Clarifications to IFRS 15 | 1 Jan. 2018 |
| IFRIC 22 | Foreign Currency Transactions and Advance Consideration | 1 Jan. 2018 |
| Improvements to IFRS 2014 – 2016 | Amendments to IFRS 1 and IAS 28 | 1 Jan. 2018 |

[1] Financial years beginning on or after the date stated.

**IFRS 9 Financial Instruments.** IFRS 9 supersedes existing IAS 39 requirements and sets out revised requirements for the classification and measurement of financial instruments, including a new model for expected credit losses for the purpose of determining the impairment of financial assets, as well as new general requirements for hedge accounting. It also takes over the requirements for the recognition and derecognition of financial instruments contained in IAS 39.
QSC has applied the full retrospective approach for the transition and has drawn on the exemption which permits companies not to adjust comparative information for prior periods with regard to changes in classification and measurement (including impairment).
IFRS 9 requires extensive new disclosures, particularly with regard to hedge accounting, credit risk and expected credit losses.

**1. Classification – financial assets and liabilities.** Financial assets and liabilities at QSC that are within the scope of IFRS 9 mainly relate to primary debt instruments. The fair value of the interest swap without a hedge relationship is immaterial. New requirements in IFRS 9 chiefly apply to the subsequent measurement of financial assets.
IFRS 9 includes three categories for classifying financial assets: measured at amortised cost, measured at fair value through profit or loss (FVTPL) and measured at fair value through other comprehensive income (FVOCI). The standard eliminates the following existing IAS 39 categories: held to maturity, loans and receivables, and available for sale. The classification of financial liabilities is largely unchanged.

| | Previous category under IAS 39 | New category under IFRS 9 |
|---|---|---|
| **Assets not measured at fair value** | | |
| Cash and cash equivalents | Loans and receivables | Amortised cost |
| Long-term trade receivables | Loans and receivables | Amortised cost |
| Short-term trade receivables | Loans and receivables | FVOCI |
| **Liabilities measured at fair value** | | |
| Interest swaps – hedge accounting | Fair value/hedge instruments | Fair value/hedge instruments |
| **Liabilities not measured at fair value** | | |
| Trade payables and other liabilities | Other financial liabilities | Other financial liabilities |
| Other financial liabilities | Other financial liabilities | Other financial liabilities |

The classification category results from management requirements for financial debt instruments ("business model") and the cash flow criterion ("basic loan feature/SPPI").
Unlike IAS 39, IFRS 9 never permits derivatives which are embedded in contracts in which the underlying instrument is a financial asset falling within the scope of the standard to be accounted for separately. Classification of the hybrid financial instrument is rather based on an assessment of the instrument in its entirety.

Trade receivables are offered for sale in the context of factoring (see Note 18). They therefore do not meet the requirements of the "hold" business model and are therefore classified as FVOCI and measured at fair value through other comprehensive income. IFRS 9 largely retains existing IAS 39 requirements for the classification of financial liabilities. The changes are not relevant QSC.

**2. Impairments.** IFRS 9 replaces the "incurred loss model" in IAS 39 with a forward-looking expected credit loss model. Alongside an appraisal of information about past events and current conditions, due account also has to be taken of forecasts of future economic conditions. Based on the impairment methodology set out below, no changes have arisen in QSC's impairment losses.

- **Trade receivables and other receivables.** The estimated volume of expected receivables defaults was calculated using the simplified model on the basis of experience with actual receivables defaults. For the purpose of credit risk management and determining impairments, QSC subdivides its trade receivables into two groups: receivables from the project business and other receivables.
  Receivables from the project business that are not more than 180 days overdue mainly involve receivables due from major customers. In terms of their recoverability, historic data for the past four years shows a very low default rate of less than 0.02%. Unless the customer's creditworthiness changes significantly in the first 180 days following performance of the service, based on previous experience and due to materiality considerations QSC therefore does not recognise any allowance in the first 180 days. Receivables that are more than 180 days overdue are considered on an individual case basis, i.e. all receivables that are more than 180 days overdue are individually tested for impairment.
  For the purpose of determining default risks and recognising allowances, other receivables are further segmented into risk groups based on the end customer structure. Allowances based on previous experience are recognised for these risk groups. Individual allowances are recognised for receivables that are more than 180 days overdue.
  In the past, the volume of allowances recognised approximated to the receivables defaults actually arising, as a result of which the introduction of IFRS 9 has not had any implications.
  In terms of their respective contents, long-term trade receivables attributable to multiple element arrangements are linked to the receivables from the project business. Given the low level of default risk involved, allowances are only recognised if any specific payment difficulties become known. Short-term trade receivables are generally settled by customers within 90 days.
  There is only a weak correlation between the development in credit quality and gross domestic product, as a result of which only a substantial change or the identification of a more closely correlating parameter would have any impact on the specific allowance.

Application of the IFRS 9 impairment requirements has not led to any additional impairment losses.

- **Cash and cash equivalents.** Application of the IFRS 9 impairment requirements as of 1 January 2018 did not lead to any material impairments. Cash and cash equivalents are exclusively deposited on a short-term basis at German banks which, as of 31 December 2018, had received investment grade ratings from the rating agencies Standard & Poor's, Fitch and Moody's.

- **Hedge accounting.** For its interest hedge accounting, QSC has drawn on the option of continuing to account for the respective instruments in accordance with IAS 39 requirements and reserves the right to convert, where appropriate, to IFRS 9 requirements at a later point in time.

**IFRS 15 Revenue from Contracts with Customers (including the amendment to IFRS 15 dated April 2016).** IFRS 15 sets out a comprehensive framework for determining the amount and timing of revenue recognition. The new standard provides for a uniform, five-step revenue recognition model that is basically applicable to all contracts with customers. It replaces the existing requirements governing revenue recognition, including those contained in IAS 18 (Revenue), IAS 11 (Construction Contracts) and IFRIC 13 (Customer Loyalty Programmes).
QSC applied IFRS 15 for the first time in the financial year beginning on 1 January 2018, adopted the modified retrospective approach and presented comparative periods in accordance with the simplified transition requirements provided for in IFRS 15. Consistent with this approach to first-time application, contracts not yet fully performed as of 1 January 2018 have been accounted for as if they had been recognised in accordance with IFRS 15 requirements from the outset. In accordance with this approach, any cumulative item potentially arising from the conversion to IFRS 15 is recognised directly in equity. The comparative figures for prior periods have therefore not been adjusted. Changes arising in line items in the balance sheet and income statement for the 2018 reporting period as a result of first-time application of IFRS 15 have rather been explained as appropriate.
No material conversion effects have arisen for QSC.

**Amendments to IFRS 2 – Classification and Measurement of Share-based Payment Transactions.** The amendments relate to the accounting treatment of exercising conditions in connection with the measurement of cash-settled share-based payments, the classification of share-based payments settled net of tax withholdings, and the recognition of any change in the classification of the compensation from "cash-settled" to "equity-settled".
The amendments have not had any material implications for the consolidated financial statements of QSC AG.

**IFRIC 22 Foreign Currency Transactions and Advance Consideration.** IFRIC 22 addresses an application question relating to IAS 21 (The Effects of Changes in Foreign Exchange Rates). It clarifies the time from which the exchange rate used to translate foreign-currency transactions involving the receipt or payment of advance consideration is to be determined. It states that the translation rate for the underlying asset, income or expense should be determined by reference to the date of initial recognition of the asset or liability resulting from the advance consideration.
The interpretation has not had any material implications for the consolidated financial statements of QSC AG.

**Improvements to IFRS 2014 – 2016 – Amendments to IFRS 1 and IAS 28.** The Annual Improvements to IFRSs (2014 – 2016) have amended three IFRSs, of which the amendments to IFRS 1 and IAS 28 required application in the 2018 financial year:
In IAS 28, it is clarified that the measurement options for investments in associates or joint ventures that are held by a venture capital organisation, or other qualifying entity, may be exercised differently for each such investment.
Furthermore, the limited practical expedients provided for in IFRS 1. Appendix E (IFRS 1.E3 – E7) have been deleted for first-time IFRS adopters.
These amendments have not had any material implications for the consolidated financial statements of QSC AG.

QSC does not plan to make premature application of the following new or amended standards and interpretations only requiring mandatory application in subsequent financial years. Unless otherwise stated, their implications for QSC's consolidated financial statements are currently being reviewed.

| Standard / interpretation | Title of standard / interpretation or amendment | Effective date[1] |
|---|---|---|
| **EU endorsement already provided** | | |
| IFRS 16 | Leases | 1 Jan. 2019 |
| Amendments to IFRS 9 | Financial Assets Including Prepayment Features | |
| | with Negative Compensation | 1 Jan. 2019 |
| IFRIC 23 | Uncertainty over Income Tax Treatments | 1 Jan. 2019 |
| **EU endorsement still outstanding** | | |
| Amendments to IFRS 3 | Definition of a Business | 1 Jan. 2020 |
| Amendments to IAS 1 and 8 | Definition of Material | 1 Jan. 2020 |
| Amendments to IAS 19 | Plan Amendment, Curtailment or Settlement | 1 Jan. 2019 |
| Framework | Amendments to References to the Conceptual | |
| | Framework | Framework |
| Improvements to IFRS 2015 – 2017 | Amendments to IFRS 3, IFRS 11, IAS 12 and IAS 23 | 1 Jan. 2019 |

[1] Financial years beginning on or after the date stated.

**(a) EU endorsement already provided**

**IFRS 16 Leases.** IFRS 16 introduces a uniform accounting model for recognising leases in the balance sheet at lessees. In this model, a lessee recognises a right-of-use asset that embodies its right to use the underlying asset and a lease liability that embodies its obligation to make lease payments. The distinction previously made by lessees between operating and finance leases thus no longer applies. The lease liability is recognised as the present value of the lease payments still outstanding, which is calculated using the interest rate implicit in the lease. The right-of-use asset and lease liability are reduced by depreciation and repayments over the lease term. Exemptions apply for short-term leases and low-value asset leases. The accounting treatment at lessors is comparable with the current standard, i.e. lessors are still required to classify leases as finance or operating leases.
IFRS 16 replaces the existing standards and interpretations on leases, including IAS 17 (Leases), IFRIC 4 (Determining Whether an Arrangement Contains a Lease), SIC-15 (Operating Leases – Incentives) and SIC-27 (Evaluating the Substance of Transactions Involving the Legal Form of a Lease). The standard requires first-time application in the first reporting period in financial years beginning on or after 1 January 2019. Earlier application is permitted for companies that also apply IFRS 15 (Revenue from Contracts with Customers) upon initial application of IFRS 16 or earlier. The Company will not make premature application of IFRS 16.
QSC will apply IFRS 16 for the first time as of 1 January 2019 and will draw on the modified retrospective approach. For this reason, the cumulative effect resulting from application of IFRS 16 will be recognised as an adjustment to the opening balance sheet figures as of 1 January 2019 without any adjustment to the comparative information.
QSC has performed an exhaustive analysis of the contracts thereby affected. Accordingly, it has identified the overall scope of the contracts to be measured under IFRS 16, grouped these by contract type and spread them over their respective contract terms. To record leases, the Company implemented a new contract database and introduced new software to present and measure its leases. The analysis covered all material contracts meeting the definition of leases provided in IFRS 16.

The following contract types were identified:

– Subscriber line lease contracts
– Dark fibre line lease contracts
– Directional antenna lease contracts
– Collocation area lease contracts
– Data centre space lease contracts
– Car lease contracts
– Hardware and software lease contracts
– Office space and car parking space lease contracts

Application of IFRS 16 will materially influence QSC's financial position, financial performance and cash flows. QSC expects the following material implications to result from its conversion as of 1 January 2019. The expectations formulated for the balance sheet line items are subject to potential variances of +/-5 percentage points.

- The balance sheet will show an increase in total assets by € 106 million as of 1 January 2019 due to the capitalisation of right-of-use assets and the largely equivalent increase in lease liabilities. With regard to its obligations under operating lease arrangements, which are presented in the notes (see Note 40), QSC expects the main differences from measurement of the lease liabilities under IFRS 16 to result from the options exercised for leased items of low value and for short-term contracts (12 months or less), as well as from diverging assessments of extension and termination options.
- The income statement will witness a reduction in operating lease expenses. This will be countered by increases of € 30.2 million in depreciation and of € 3.5 million in interest expenses. This is expected to improve EBITDA by € 33.7 million, with the implications mainly resulting from existing leases recognised as of 1 January 2019.
- In the cash flow statement, the amended recognition of lease expenses from operating leases will result in a corresponding improvement in the cash flow from operating activities accompanied by a parallel deterioration in the cash flow from financing expenses.

The following material options and practical expedients will be exercised:

- Right-of-use assets and lease liabilities will be recognised as separate line items in the balance sheet.
- Lease contracts for low-value assets will not be treated as leases, but will in future rather be recognised as current expenses.
- Short-term leases will not be recognised in the balance sheet.
- Leases for intangible assets will be recognised under IAS 38 rather than IFRS 16.
- The lease standard will be applied to all existing contracts within its scope of application as of 1 January 2019.

Furthermore, upon applying IFRS 16 for the first time QSC will draw on the following material options and practical expedients:

- Leases with remaining terms shorter than 12 months as of 1 January 2019 will be recognised as short-term leases. Associated expenses will therefore be recognised in the short-term lease expense line item.

Overall, the new definition of a lease does not have any material implications for QSC in its capacity as a lessor.

**Amendments to IFRS 9 – Prepayment Features with Negative Compensation.** The amendments involve a limited adjustment to the assessment criteria used to classify financial assets. If certain conditions are met, financial assets including a prepayment feature with negative compensation may be recognised at amortised cost or at fair value through other comprehensive income rather than at fair value through profit or loss. The amendments require first-time application as of 1 January 2019.
QSC currently does not expect these to have any material implications for the consolidated financial statements.

**IFRIC 23 Uncertainty over Income Tax Treatments.** The tax treatment of specific circumstances and transactions may depend on future recognition of such by the tax authorities or fiscal courts. IAS 12 (Income Taxes) sets out how current and deferred taxes should be recognised. IFRIC 23 supplements the requirements of IAS 12 by addressing uncertainties regarding the income tax treatment of circumstances and transactions.
This interpretation requires first-time application in the first reporting period in financial years beginning on or after 1 January 2019. Earlier application is permitted.
QSC currently does not expect this to have any material implications for the consolidated financial statements.

**(b) EU endorsement still outstanding**

**Amendments to IFRS 3 – Definition of a Business.** With this amendment, the IASB has clarified that a business comprises a group of activities and assets that, as a minimum, must include inputs and a substantive process that together significantly contribute to creating outputs. Furthermore, the amendment has narrowed the definition of outputs to the provision of goods and services to customers. The reference to lowering costs has been deleted. Furthermore, the new requirements now also include an optional "concentration test" to permit the simplified identification of a business. Subject to adoption in EU law, the amendments require application to business combinations with acquisition dates on or after 1 January 2020. Earlier application is permitted.
QSC currently does not expect these to have any material implications for the consolidated financial statements.

**Amendments to IAS 1 and IAS 8 – Definition of Material.** These amendments introduce a uniform and precisely delineated definition for IFRS in respect of the materiality of information provided in financial statements and accompany this with illustrative examples. In this context, the definitions provided in the Conceptual Framework, IAS 1, IAS 8 and IFRS Practice Statement 2 (Making Materiality Judgements) have been harmonised. Subject to adoption in EU law, the amendments require first-time application as of 1 January 2020. Earlier application is permitted.
QSC currently does not expect these to have any material implications for the consolidated financial statements.

**Amendment to IAS 19 – Plan Amendment, Curtailment or Settlement.** IAS 19 requires pension obligations to be remeasured on the basis of updated assumptions in the event of any plan amendments, curtailments or settlements.
The amendment clarifies that, after the occurrence of such event, the service cost and net interest for the rest of the period must be determined using the updated assumptions.
Subject to adoption in EU law, the amendment requires first-time application in the first reporting period in financial years beginning on or after 1 January 2019. Earlier application is permitted. QSC currently does not expect this to have any material implications for the consolidated financial statements.

**Framework: Amendments to References to the Conceptual Framework.** The revised Conceptual Framework comprises a new and superordinate section, namely "Status and purpose of the conceptual framework" and a new total of eight complete constituent sections.
Sections on "The reporting entity" and "Presentation and disclosure" have now been included, while the "Recognition" section has been extended to include "Derecognition".
Furthermore, contents have been amended. The distinction made within "income" between "revenues" on the one hand and "gains" on the other, for example, has been abolished.
The revision to the Conceptual Framework has been accompanied by amendments to the references made to the framework in various standards.
QSC currently does not expect these to have any material implications for the consolidated financial statements.

**Improvements to IFRS 2015 – 2017 – Amendments to IFRS 3, IFRS 11, IAS 12 and IAS 23.** The Annual Improvements to IFRSs (2015 – 2017) have amended four IFRSs.
For IFRS 3 the amendments clarify that, when an entity obtains control of a business in which it was previously involved in the context of a joint operation, it must apply the principles governing step business combinations. The interest previously held by the acquirer must be remeasured.
For IFRS 11 the amendments clarify that, when an entity obtains joint control of a business in which it was previously involved in the context of a joint operation, it is not required to remeasure previously held interests in that business.
IAS 12 has been amended to confirm that all income tax consequences of dividends should be treated in the same way as the income on which the dividends are based.
Finally, in IAS 23 the amendments determine that, when calculating the capitalisation rate for funds that an entity generally borrows to procure qualifying assets, no account should be taken of the costs of borrowing specifically taken up to procure the qualifying assets until such time that the related assets are complete.
Subject to adoption in EU law, the amendments require first-time application in the first reporting period in financial years beginning on or after 1 January 2019. Earlier application is permitted. QSC currently does not expect these to have any material implications for the consolidated financial statements.

# Notes to the Consolidated Income Statement

## 6 REVENUES

QSC generated revenues of € 118,107k with resellers (2017: € 107,222k) and revenues of € 248,736k with end customers (2017: € 250,645k). Resellers offer QSC's products and services to end customers under their own name and on their own account.
Revenues from hardware leases in the context of new multiple element arrangements amounted to € 227k in 2018 (2017: € 2,866k).
A breakdown of revenues by geographical regions and distribution channels is presented in the tables below. Furthermore, the revenues thereby broken down are reconciled with the segments described in Note 35.

| € 000s | Geographical region | | | | | |
|---|---|---|---|---|---|---|
| | Germany | | Outside Germany | | Total | |
| | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 |
| **Segments** | | | | | | |
| Telecommunications | 184,202 | 181,953 | 16,709 | 6,783 | 200,911 | 188,736 |
| Outsourcing | 88,746 | 98,148 | 2,287 | 3,803 | 91,033 | 101,951 |
| Consulting | 36,486 | 36,949 | 1,908 | 2,458 | 38,394 | 39,407 |
| Cloud | 35,841 | 27,503 | 664 | 270 | 36,505 | 27,773 |
| | **345,275** | **344,553** | **21,568** | **13,314** | **366,843** | **357,867** |

| € 000s | Distribution channel | | | | | |
|---|---|---|---|---|---|---|
| | End customer | | Reseller | | Total | |
| | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 |
| **Segments** | | | | | | |
| Telecommunications | 82,804 | 81,514 | 118,107 | 107,222 | 200,911 | 188,736 |
| Outsourcing | 91,033 | 101,951 | - | - | 91,033 | 101,951 |
| Consulting | 38,394 | 39,407 | - | - | 38,394 | 39,407 |
| Cloud | 36,505 | 27,773 | - | - | 36,505 | 27,773 |
| | **248,736** | **250,645** | **118,107** | **107,222** | **366,843** | **357,867** |

QSC generally draws on the practical expedient provided in IFRS 15.121, which permits outstanding performance obligations in the context of contracts with expected original terms of no longer than one year and revenues recognized in line with their respective invoicing to be exempted from the disclosure obligation.

## 7 COST OF REVENUES

Of total research and development expenses of € 7,910k (2017: € 4,671k), an amount of € 2,009k was capitalised as development expenses in the 2018 financial year (2017: € 216k).

| € 000s | 2018 | 2017 |
|---|---|---|
| Purchased services | 162,653 | 148,318 |
| Building, operation and maintenance of infrastructure | 43,315 | 41,538 |
| Depreciation and amortisation | 22,004 | 24,743 |
| Personnel expenses | 70,697 | 76,234 |
| Non-cash share-based compensation | 152 | 226 |
| **Cost of revenues** | **298,821** | **291,059** |

## 8 SALES AND MARKETING EXPENSES

| € 000s | 2018 | 2017 |
|---|---|---|
| Personnel expenses | 16,951 | 16,288 |
| Commission payments | 5,632 | 7,048 |
| Other sales and marketing expenses | 3,003 | 1,460 |
| Allowances for bad debt and fair dealing payments | 549 | 3 |
| Advertising expenses | 2,165 | 2,366 |
| Depreciation and amortisation | 1,299 | 1,296 |
| Non-cash share-based compensation | 79 | 85 |
| **Sales and marketing expenses** | **29,678** | **28,546** |

The commission payments reported for 2017 include expenses of € 1,398k that constitute consideration payable to a customer pursuant to IFRS 15.70 and, upon first-time application of IFRS 15 in the 2018 financial year, now require recognition as deductions to revenues. The corresponding commission payments in 2018 amounted to € 1,369k.

## 9 GENERAL AND ADMINISTRATIVE EXPENSES

| € 000s | 2018 | 2017 |
|---|---|---|
| Other general and administrative expenses | 14,127 | 13,212 |
| Personnel expenses | 13,381 | 13,828 |
| Depreciation and amortisation | 3,284 | 3,440 |
| Non-cash share-based compensation | 101 | 259 |
| **General and administrative expenses** | **30,893** | **30,739** |

## 10 WRITE-DOWNS AND IMPAIRMENTS

Write-downs and impairments are allocated to individual corporate functions as follows:

| € 000s | 2018 | 2017 |
|---|---|---|
| Write-downs of cost of revenues | 22,004 | 24,743 |
| Write-downs of sales and marketing expenses | 1,299 | 1,296 |
| Write-downs of general and administrative expenses | 3,284 | 3,440 |
| Write-downs of other operating expenses | - | 1,100 |
| **Write-downs and impairments** | **26,587** | **30,579** |

## 11 OTHER OPERATING INCOME AND EXPENSES

| € 000s | 2018 | 2017 |
|---|---|---|
| Sundry other operating income | 1,682 | 1,727 |
| Income from subsidised projects | 453 | 721 |
| Income from disposal of long-term assets | 29 | 36 |
| **Other operating income** | **2,164** | **2,484** |

Sundry other operating income mainly includes income of € 873k from third parties in connection with value-added services (2017: € 1,191k), reimbursements of € 458k from former commission partners (2017: € 0k) and non-period income of € 37k (2017: € 213k).

| € 000s | 2018 | 2017 |
|---|---|---|
| Sundry other operating expenses | 1,113 | 1,749 |
| Losses from disposal of long-term assets | 27 | 49 |
| Write-downs of customer bases | - | 1,100 |
| **Other operating income** | **1,140** | **2,898** |

Sundry other operating expenses mainly comprise expenses of € 974k in connection with value-added services (2017: € 1,202k) and non-period expenses of € 122k (2017: € 8k).

## 12 FINANCIAL RESULT

The financial expenses of € 4,504k (2017: € 4,658k) mainly include interest expenses for loans and interest on interest rate hedges, which together amounted to € 4,121k (2017: € 4,246k). Furthermore, interest expenses also include expenses of € 11k for financing arrangements (2017: € 25k). The net interest charge on pension provisions amounts to € 90k (2017: € 105k). No borrowing costs attributable to qualifying assets were incurred.

## 13 EARNINGS PER SHARE

The calculation of basic earnings per share is based on the consolidated net income attributable to ordinary shareholders in the parent company and the weighted average number of shares in circulation in the year under report.
A total of 124,172,487 shares were in circulation throughout the 2018 financial year.
The calculation of diluted earnings per share is based on the consolidated net income attributable to ordinary shareholders in the parent company and the weighted average number of shares in circulation in the year under report following adjustment for all dilutive effects of the convertible bonds issued in connection with stock option plans.

| € 000s | 2018 | 2017 |
|---|---|---|
| Consolidated net income attributable to shareholders in the parent company (basic) | 3,518 | 5,336 |
| Share-based compensation in connection with subscribed convertible bonds | - | (11) |
| Consolidated net income attributable to shareholders in the parent company (diluted) | 3,518 | 5,325 |

| Unit share | 2018 | 2017 |
|---|---|---|
| Weighted average number of shares issued (basic) | 124,172,487 | 124,172,487 |
| Effect of conversion of convertible bonds | - | 337,500 |
| Weighted average number of shares issued (diluted) | 124,172,487 | 124,509,987 |

The conversion effects for convertible bonds resulting from stock option plans and the associated share-based compensation only account for those convertible bonds for which the conversion terms were met at the balance sheet date, even if the respective holding period prior to conversion had not yet expired.

## 14 PERSONNEL EXPENSES AND EMPLOYEES

| **€ 000s** | **2018** | **2017** |
|---|---|---|
| Wages and salaries | 87,468 | 92,401 |
| Employer social security contributions (pension insurance) | 6,693 | 6,801 |
| Employer social security contributions (other) | 6,455 | 6,709 |
| Pension expenses | 413 | 439 |
| Non-cash share-based compensation | 332 | 570 |
| **Personnel expenses** | **101,361** | **106,920** |

Wages and salaries include expenses of € 2,984k for the termination of employment contracts (2017: € 5,019k).
During the 2018 financial year, the companies included in consolidation had an average total of 1,306 employees (2017: 1,356). The following table presents the distribution of employees by corporate function:

| | **2018** | **2017** |
|---|---|---|
| Sales and marketing | 200 | 187 |
| Technology and consulting | 987 | 1,056 |
| Administration | 110 | 104 |
| Head office departments | 9 | 9 |
| **Number of employees by corporate function (average)** | **1,306** | **1,356** |

# Notes to the Consolidated Balance Sheet

## 15 PROPERTY, PLANT AND EQUIPMENT

| € 000s | Land and buildings | Network and technical equipment | Operational and business equipment | Total |
|---|---|---|---|---|
| **Gross value at 1 Jan. 2017** | **30,049** | **400,188** | **57,025** | **487,262** |
| Additions | - | 11,020 | 2,193 | 13,213 |
| Disposals | (11) | (163,323) | (32,077) | (195,411) |
| Reclassifications | - | 3 | (5) | (2) |
| **Gross value at 31 Dec. 2017** | **30,038** | **247,888** | **27,136** | **305,062** |
| Additions | - | 9,091 | 368 | 9,459 |
| Disposals | (417) | (235) | (91) | (743) |
| Reclassifications | - | (24) | 24 | - |
| **Gross value at 31 Dec. 2018** | **29,621** | **256,720** | **27,437** | **313,778** |
| **Accumulated depreciation and impairments at 1 Jan. 2017** | **5,690** | **346,870** | **47,789** | **400,349** |
| Additions | 820 | 16,007 | 2,228 | 19,055 |
| Disposals | - | (163,287) | (32,064) | (195,351) |
| Reclassifications | - | (2) | 2 | - |
| **Accumulated depreciation and impairments at 31 Dec. 2017** | **6,510** | **199,588** | **17,955** | **224,053** |
| Additions | 820 | 14,704 | 1,972 | 17,496 |
| Disposals | - | (182) | (91) | (273) |
| Reclassifications | - | - | - | - |
| **Accumulated depreciation and impairments at 31 Dec. 2018** | **7,330** | **214,110** | **19,836** | **241,276** |
| **Carrying amounts at 31 Dec. 2017** | **23,528** | **48,300** | **9,181** | **81,009** |
| **Carrying amounts at 31 Dec. 2018** | **22,291** | **42,610** | **7,601** | **72,502** |

As of 31 December 2018, the carrying amount of technical equipment and operating and business equipment held under finance lease arrangements totalled € 100k (2017: € 471k).

Additions in the 2018 financial year totalled € 9,459k (2017: € 13,213k). As of 31 December 2018, the "Network and technical equipment" line item included assets under construction amounting to € 381k (2017: € 169k) relating to the expansion of data centres.
In the income statement, QSC recognises depreciation and amortisation under cost of revenues, sales and marketing expenses and general and administrative expenses respectively.

## 16 GOODWILL

Consistent with IFRS 8 requirements, the Company's internal organisational structure used by the management for business decisions and performance assessments has been referred to as the basis for delineating segments. Accordingly, segment reporting is aligned to the Company's product structure. This has resulted in the segments of Telecommunications, Outsourcing, Consulting and Cloud.
The cash-generating units (CGUs) to which goodwill has been allocated correspond to the operating segments determined for the companies included in consolidation pursuant to IFRS 8.5. The operating segments represent the lowest level of reporting at the companies included in consolidation for which goodwill is systematically monitored.
The carrying amount of goodwill is allocated to the segments as follows:

| € 000s | 2018 | 2017 |
|---|---|---|
| Telecommunications | 20,844 | 20,844 |
| Consulting | 10,409 | 10,409 |
| Cloud | 24,315 | 24,315 |
| **Carrying amount of goodwill** | **55,568** | **55,568** |

The goodwill allocated to the **Outsourcing segment** was written down in full in the 2016 financial year.

QSC determines the recoverable amount of the CGUs as their value in use and refers here to the cash flow forecasts from continued use of the CGUs based on the Management Board's planning for the Company for a three-year period. This planning accounts for management expectations with respect to the future performance of individual business units and also takes due account of internal assumptions concerning the marketing opportunities for innovative applications in the ICT market, as well as of past experience.

The **Telecommunications segment** comprises the two areas of corporate customers and resellers. There was a slight increase in demand from corporate customers for TC services in 2018. This was accompanied by a temporary rise in demand from resellers in the international voice termination business. However, this already returned to normal levels in the second half of the year. The sustainable growth rate has therefore still been accounted for at 0% (2017: 0%).
In the detailed planning period, the decrease in the segment margin due to the higher share of revenues in the reseller business, which traditionally has lower margins, is more than offset by lower structural expenses. This results in a slight rise in EBIT with a stable EBIT margin.

In the **Consulting segment**, the mainly customer-driven need to convert to S/4HANA will lead to strong revenue growth in the years from 2019 to 2021. This revenue performance and the increasing deployment of internal rather than external staff will significantly increase EBIT and the EBIT margin. The sustainable growth rate has been accounted for at 0.5% in the corporate planning (2017: 0.5%).

The especially strong revenue growth in the **Cloud segment**, comparable with the development in revenues for innovative new product developments, is largely attributable to the new Pure Enterprise Cloud (PEC) platform. Alongside the acquisition of new customers, a further key growth driver results above all from migrating existing Outsourcing customers. Another strong growth area involves activities at QSC's subsidiary Q-loud, which offers services for the Internet of Things (IoT) business field. Consistent with the revenue forecast, EBIT and the EBIT margin will also show correspondingly strong growth. As revenue growth is also expected beyond 2021, the sustainable growth rate for the Cloud segment has been stated at 1.0% (2017: 1.0%).

To discount the cash flows expected for the respective CGUs, the segment-specific weighted average costs of capital (WACC) were determined. Segment-specific beta factors were derived by reference to peer group data.
Segment-specific pre-tax discount rates are as follows:

| | 2018 | 2017 |
|---|---|---|
| Telecommunications | 8.64% | 8.84% |
| Consulting | 10.75% | 8.10% |
| Cloud | 12.06% | 11.89% |

The discount rate is a pre-tax key figure. It has been based on the yield on government bonds issued by the government on the relevant markets and denominated in the same currencies as the underlying cash flows. This discount rate is adjusted to account for a risk premium reflecting the higher overall risk involved in an equity investment and the specific risk profiles of individual CGUs.
The values in use of the Telecommunications, Consulting and Cloud CGUs exceeded the carrying amounts of the respective assets by the amounts presented in the following table:

| | 2018 | 2017 |
|---|---|---|
| Telecommunications | 128,947 | 86,341 |
| Consulting | 13,323 | 15,283 |
| Cloud | 7,137 | 27,687 |

The calculation of the CGUs' value in use is subject to forecasting uncertainties, particularly in respect of the development in prices and market shares, with these uncertainties requiring consideration when planning revenues, gross profit, the capex ratio and the discount rate.
Various scenario analyses were performed for the impairment test. An impairment requirement would arise in the CGUs if, all other factors being equal, revenues in the final planning year, and thus in perpetuity, were to fall short of the revenues assumed in the planning by the following amounts:

| | 2018 | 2017 |
|---|---|---|
| Telecommunications | -15.7% | -11.1% |
| Consulting | -3.5% | -3.4% |
| Cloud | -1.8% | -5.1% |

## 17 OTHER INTANGIBLE ASSETS

| € 000s | Licenses | Acquired software | Internally generated software | Customer connections | Customer bases | Brands | Other | Total |
|---|---|---|---|---|---|---|---|---|
| **Gross value** | | | | | | | | |
| **at 1 Jan. 2017** | **2,140** | **33,203** | **8,659** | **147,757** | **36,223** | **2,426** | **15,971** | **246,379** |
| Additions | 96 | 1,259 | 143 | 4,473 | - | 200 | 21 | 6,192 |
| Disposals | (377) | (19,221) | - | (89,060) | - | - | (3,927) | (112,585) |
| Reclassifications | - | 2 | - | - | - | - | - | 2 |
| **Gross value** | | | | | | | | |
| **at 31 Dec. 2017** | **1,859** | **15,243** | **8,802** | **63,170** | **36,223** | **2,626** | **12,065** | **139,988** |
| Additions | 89 | 2,559 | 497 | 4,915 | - | 100 | 5 | 8,165 |
| Disposals | - | (34) | - | - | - | - | - | (34) |
| Reclassifications | - | - | - | - | - | - | - | - |
| **Gross value** | | | | | | | | |
| **at 31 Dec. 2018** | **1,948** | **17,768** | **9,299** | **68,085** | **36,223** | **2,726** | **12,070** | **148,119** |
| **Accumulated amortisa-** | | | | | | | | |
| **tion and impairments** | | | | | | | | |
| **at 1 Jan. 2017** | **1,493** | **29,204** | **8,659** | **141,664** | **16,985** | **2,426** | **15,168** | **215,599** |
| Additions | 107 | 2,711 | 10 | 5,311 | 3,273 | - | 112 | 11,523 |
| Disposals | (330) | (19,221) | - | (89,060) | - | - | (3,873) | (112,484) |
| **Accumulated amortisa-** | | | | | | | | |
| **tion and impairments** | | | | | | | | |
| **at 31 Dec. 2017** | **1,270** | **12,694** | **8,669** | **57,915** | **20,258** | **2,426** | **11,407** | **114,639** |
| Additions | 114 | 1,892 | 10 | 4,914 | 2,055 | 100 | 6 | 9,091 |
| Disposals | - | (22) | - | - | - | - | - | (22) |
| **Accumulated amortisa-** | | | | | | | | |
| **tion and impairments** | | | | | | | | |
| **at 31 Dec. 2018** | **1,384** | **14,564** | **8,679** | **62,829** | **22,313** | **2,526** | **11,413** | **123,708** |
| **Carrying amounts** | | | | | | | | |
| **at 31 Dec. 2017** | **589** | **2,549** | **133** | **5,255** | **15,965** | **200** | **658** | **25,349** |
| **Carrying amounts** | | | | | | | | |
| **at 31 Dec. 2018** | **564** | **3,204** | **620** | **5,256** | **13,910** | **200** | **657** | **24,411** |

Customer connections involve non-recurring commission payments made to retailers and distributors for each new customer line. These are capitalised together with installation costs under intangible assets and written down over a period of 24 months. As of 31 December 2018, the "Acquired software" line item included assets under construction amounting to € 2,401k (2017: € 511k) and the "Internally generated software" line item included assets under construction of € 294k (2017: € 0k).

## 18 TRADE RECEIVABLES

| € 000s | 2018 | 2017 |
|---|---|---|
| **Trade receivables** | | |
| Long-term trade receivables | 1,953 | 2,461 |
| Short-term trade receivables | 56,057 | 52,278 |
| **Trade receivables** | **58,010** | **54,739** |

Long-term trade receivables are attributable to the recognition of lease receivables for multiple element arrangements. The receivables presented are not subject to any material restrictions on ownership or disposability. The carrying amounts correspond to the fair values.
QSC typically concludes full amortisation contacts with average rental terms of 36 to 48 months and without purchase options. Following expiry of the basic rental period, it has the option of extending the contract or selling leased items for which no purchase options were granted. No residual values are guaranteed.
Short-term trade receivables bear no interest and generally have maturities of 30 to 90 days. Receivables from the project business that are not more than 180 days overdue mainly involve receivables due from major customers. In terms their historic recoverability, these receivables showed a very low default rate of less than 0.02% over the past four years. Unless the creditworthiness of the respective customer changes significantly in the first 180 days after performance of the respective service, based on historic empirical values and with due consideration of materiality factors QSC does not recognise any allowance in this period. Receivables that are more than 180 days overdue are considered on an individual case basis, i.e. all receivables more than 180 days overdue are individually tested for impairment.
For the purpose of determining default risks and allowances, other receivables are further segmented into risk groups based on the end customer structure. Allowances based on historic empirical values are recognised for these risk groups. Individual allowances are recognised for other receivables that are more than 180 days overdue.

As of 31 December 2018, trade receivables amounting to € 3,689k were impaired (2017: € 3,196k). The individual allowances schedule developed as follows:

| € 000s | 2018 | 2017 |
|---|---|---|
| **Allowance at 1 January** | **3,196** | **3,397** |
| Added and expensed | 859 | 64 |
| Utilised | - | - |
| Reversed | (366) | (265) |
| **Allowance at 31 December** | **3,689** | **3,196** |

The allowance recognised for trade receivables as of 31 December 2018 is structured as follows:

| € 000s | Default rate (weighted average) | Gross carrying amount | Allowance | Impaired credit-worthiness |
|---|---|---|---|---|
| **Receivables from project business** | | | | |
| less than 180 days overdue | 0.02% | 24,552 | (4) | no |
| more than 180 days overdue | 85.71% | 222 | (190) | yes |
| **Other receivables** | | | | |
| less than 180 days overdue | 0.73% | 33,202 | (241) | no |
| more than 180 days overdue | 71.03% | 752 | (534) | yes |
| more than 365 days overdue | 91.57% | 2,971 | (2,721) | yes |
| **Total** | | **61,699** | **(3,689)** | |

The analysis of trade receivables as of 31 December 2017 is as follows:

| € 000s | 2017 |
|---|---|
| **Gross total** | |
| Impaired | 3,792 |
| Neither past due nor impaired | 47,207 |
| Past due but not impaired | |
| < 90 days | 6,925 |
| 91 – 120 days | - |
| > 120 days | 11 |
| **Gross total** | **57,935** |

Within a factoring agreement with NORD/LB Luxembourg S.A. Covered Bond Bank, QSC regularly sells certain short-term trade receivables with a total volume of up to € 18.5 million to the bank. As of the balance sheet date, trade receivables with a nominal amount of € 15.7 million had been transferred (2017: € 10.5 million).
In the event of any default, the factoring company will collect the amount deposited on the reserve account (2018: € 236k; 2017: € 158k). Furthermore, under the factoring agreement any payments received from the commercial credit insurance will each be assigned to the factoring company in the amount of the claims accruing from the receivables sold.
The nominal amount corresponds to the fair value of the receivables assigned. Apart from the default risk retained, the receivables thereby assigned have been retired.

## 19 PREPAYMENTS

The long-term prepayments of € 3,353k (2017: € 2,549k) and short-term prepayments of € 5,657k (2017: € 6,809k) chiefly consist of prepayments for maintenance agreements, leased lines, leased technology premises and insurance.

## 20 INVENTORIES

Inventories totalled € 670k as of 31 December 2018 (2017: € 649k) and mainly comprised technical merchandise held for sale and amounting to € 612k (2017: € 622k), consumables of € 23k (2017: € 27k) and advance payments of € 35k (2017: € 0k).

## 21 OTHER ASSETS

Other short-term assets amount to € 959k (2017: € 569k) and mainly comprise receivables of € 381k due from the tax authorities (2017: € 181k), security of € 236k (2017: € 158k) that is subject to restrictions on disposability due to the sale of the respective receivables and creditors with debit accounts of € 43k (2017: € 18k). Furthermore, QSC also has other long-term assets of € 430k (2017: € 156k).
Other assets include IFRS 15 contract assets in an amount of € 410k. Of these, € 287k are long-term and € 123k short-term. They are depreciated over the term of the underlying contract.

## 22 CASH AND CASH EQUIVALENTS

Cash and cash equivalents amounted to € 53,618k at the 2018 balance sheet date (2017: € 61,881k) and consisted of cash at banks and cash on hand.

## 23 ISSUED CAPITAL

As in the previous year, issued capital at the Company amounted to € 124,172,487 and comprised 124,172,487 no-par shares.
In the 2018 financial year, a dividend of € 0.03 per share with dividend entitlement was distributed for the previous year (€ 3,725k).

## 24 CAPITAL RESERVE

The capital reserve amounted to € 144,119k as of 31 December 2018 (2017: € 143,787k). This amount also includes the deferred share-based compensation for the stock option plan. The year-on-year change is due to non-cash share-based compensation of € 332k.

## 25 AUTHORISED AND CONDITIONAL CAPITAL

**Authorised capital.** The Management Board is authorised by resolution of the Annual General Meeting on 27 May 2015, subject to approval by the Supervisory Board, to increase the Company's issued capital by up to a total of € 50,000,000 on one or several occasions up to 26 May 2020 by issuing new no-par registered shares in return for contributions in cash and/or kind (Authorised Capital). When drawing on authorised capital, the Management Board may, subject to approval by the Supervisory Board, exclude shareholders' subscription rights in four cases: (1) to exclude residual amounts from shareholders' subscription rights; (2) when the new shares are issued in return for contributions in kind, particularly in the context of company acquisitions;

(3) if, pursuant to § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG), the new shares are issued in return for cash contributions and if, at the time of final stipulation, the issue price does not fall materially short of the stock market price of the shares already listed; and (4) to the extent necessary to issue subscription rights for new shares to the bearers or creditors of warrant and/or convertible bonds in order to avoid dilution of their respective holdings.
This authorised capital is intended to enable QSC to react swiftly and flexibly to opportunities arising on the capital market and where necessary to obtain equity capital on favourable terms. No use was made of authorised capital in the past financial year.

**Conditional capital.** The Company had conditional capital totalling € 46,490,365 as of the balance sheet date. This was divided into Conditional Capital IV (€ 40,000,000), Conditional Capital VII (€ 740,365), Conditional Capital VIII (€ 5,000,000) and Conditional Capital IX (€ 750,000). Conditional Capitals VII, VIII and IX serve to secure the conversion rights of bearers of convertible bonds that QSC has issued or may issue within the framework of existing stock option plans to Management Board members (Conditional Capital IX), Management Board members, managing directors of affiliated companies, employees of QSC and affiliated companies (Conditional Capitals VII and VIII) and other parties contributing to the Company's success (Conditional Capital VII).
Conditional Capital IV may be used by the Management Board to create tradable warrant and/or convertible bonds. The Management Board is authorised by resolution of the Annual General Meeting on 27 May 2015 to issue such instruments in order to access an additional, low-interest financing option given favourable capital market conditions. The convertible bonds may be issued in return for both cash contributions and contributions in kind. The Management Board is authorised, subject to approval by the Supervisory Board, to exclude shareholders' subscription rights to these warrant and/or convertible bonds in four cases: (1) to settle residual amounts resulting from the subscription ratio; (2) when the bonds are issued in return for contributions in kind, particularly in the context of company acquisitions; (3) if, in the case of bonds being issued in return for cash contributions pursuant to § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG), the issue price does not fall materially short of the market value of the bonds; and (4) to the extent necessary to issue subscription rights to the bearers or creditors of warrant and/or convertible bonds previously issued in order to avoid dilution of their respective holdings. To date, the Management Board has not acted on the authorisation to issue tradable warrant and/or convertible bonds.
The exclusion of shareholders' subscription rights pursuant to § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG) may only apply for the use of treasury stock, for the issue of new shares from authorised capital and for the issue of warrant and/or convertible bonds corresponding up to an aggregate total of no more than 10% of issued capital during the term of the respective authorisation. Apart from this, the exclusion of shareholders' subscription rights, irrespective of the legal grounds, for the use of treasury stock, for the issue of new shares from authorised capital and for the issue of warrant and/or convertible bonds (including those issued within QSC's stock option plans) may not exceed an aggregate total of 20% of issued capital during the term of the respective authorisation.

## 26 OTHER RESERVES

The development in this item in the 2018 and 2017 financial years is presented in the consolidated statement of changes in equity.
Other reserves were structured as follows as of 31 December:

| € 000s | 2018 | 2017 |
|---|---|---|
| **Other reserves** | | |
| Actuarial losses on pension plans | (1,319) | (1,350) |
| Change in fair value of cash flow hedge | (212) | (931) |
| **Other reserves** | **(1,531)** | **(2,281)** |

The values are stated in each case after deferred taxes.

## 27 OTHER FINANCIAL LIABILITIES

Other financial liabilities comprise the following items:

| € 000s | 2018 | 2017 |
|---|---|---|
| **Long-term liabilities** | | |
| Secured bank loans | 100,000 | 135,130 |
| Convertible bonds | 36 | 38 |
| Liabilities under finance lease arrangements | - | 76 |
| **Long-term liabilities** | **100,036** | **135,244** |

| € 000s | 2018 | 2017 |
|---|---|---|
| **Short-term liabilities** | | |
| Portion of secured bank loans maturing in short term | 19,937 | 1,282 |
| Portion of liabilities under finance lease arrangements maturing in short term | 76 | 295 |
| **Short-term liabilities** | **20,013** | **1,577** |

Information about the convertible bonds can be found in Note 36. Outstanding liabilities are governed by the following conditions:

| € 000s | Nominal interest rate | Maturity | 2018 | 2017 |
|---|---|---|---|---|
| **Long-term liabilities** | | | | |
| Secured bank loans | | | 100,000 | 135,130 |
| of which floating-interest | | | 76,000 | 87,500 |
| Promissory note loan: Tranche 1 | 6M Euribor + 1.4% | 2019 | - | 56,500 |
| Promissory note loan: Tranche 2 | 3M Euribor + 1.2% | 2019 | - | 20,000 |
| Promissory note loan: Tranche 3 | 6M Euribor + 1.8% | 2021 | 11,000 | 11,000 |
| Syndicated loan: Facility 1 | 3M Euribor + 1.75% | 2021 | 35,000 | - |
| Syndicated loan: Facility 2 | 3M Euribor + 1.55% | 2021 | 30,000 | - |
| of which fixed-interest | | | 24,000 | 47,630 |
| Promissory note loan: Tranche 4 | 2.29% | 2019 | - | 23,500 |
| Promissory note loan: Tranche 5 | 3.05% | 2021 | 24,000 | 24,000 |
| Further secured bank loan | 4.15% | 2019 | - | 130 |
| Convertible bonds | 3.50% | from 2019 | 36 | 38 |
| Liabilities under finance lease arrangements | 7.14% | 2019 | | 76 |
| **Long-term liabilities** | | | **100,036** | **135,244** |
| **Short-term liabilities** | | | | |
| Due to banks | | | 19,937 | 1,282 |
| of which fixed-interest | | | | |
| Promissory note loan: Tranche 4 | 2.29% | 2019 | 19,000 | - |
| Further secured bank loan | 4.15% | 2019 (prev. yr.: 2018) | - | 281 |
| Interest liabilities | | 2019 (prev. yr.: 2018) | 937 | 1,001 |
| Liabilities under finance lease arrangements | 7.14% | 2019 (prev. yr.: 2018) | 76 | 295 |
| **Short-term liabilities** | | | **20,013** | **1,577** |
| **Total interest-bearing financial liabilities** | | | **120,049** | **136,821** |

In the 2017 and 2018 financial years, the Company prematurely repaid loan liabilities of € 10,000k (2017) and € 81,411k (2018).

On 11 March 2016, QSC AG concluded a syndicated loan agreement for an amount of € 70,000k and with a term running until 11 March 2021. On 5 July 2018, the lending commitment under this contract was increased by € 30,000k without any change to the remaining term. As of the balance sheet date, two amounts cumulatively totalling € 65,000k had been drawn down.

The loan agreements serve to finance the Company's general working capital. Drawdowns of loan amounts depend on QSC complying with specified key financial ratios based on EBITDA and the Company's debt servicing capacity during the term of the credit facility. These financial covenants were complied with in the 2018 financial year.

| € 000s | 2018 | 2017 |
|---|---|---|
| **Liabilities under finance lease arrangements** | | |
| Future minimum lease payments under finance | | |
| and hire purchase arrangements | | |
| Up to 1 year | 76 | 306 |
| 1 to 5 years | - | 76 |
| Over 5 years | - | - |
| **Liabilities under finance lease arrangements** | **76** | **382** |
| Interest portion | - | 11 |
| **Present value of future minimum lease payments** | **76** | **371** |

The finance lease arrangements relate to technical equipment.

## 28 PENSION PROVISIONS

QSC operates defined benefit pension plans which are partially secured through reinsurance policies that are classified as plan assets in accordance with IAS 19.
Pension provisions cover the obligations resulting from pension commitments made to one member of the Supervisory Board during his previous activity as a member of QSC's Management Board and to two former Management Board members at the former INFO AG, as well as obligations resulting from pension commitments made to parts of QSC's, Plusnet's and Ventelo's workforces in previous years.
The pension entitlements relate to defined benefits which depend primarily on the period of service with the Company and the relevant level of pensionable salary. These defined benefit plans expose QSC to various actuarial risks, including longevity and interest rate risks.
The pension provisions for defined benefit plans are measured using the projected unit credit method in accordance with the requirements of IAS 19 and takes future developments into account. The biometric calculations were based for the first time on the 2018 G biometric tables published in 2018 by Prof. Dr. Klaus Heubeck – Lizenz Heubeck-Richttafeln-GmbH, Cologne (2017: 2015 G biometric tables). This conversion resulted in an actuarial loss of € 91k.

QSC recognises all actuarial gains and losses directly through OCI. In 2018, the accumulated actuarial gains and losses amounted to € 1,319k and were recognised through OCI (2017: € 1,350k). Total actuarial gains/losses after taxes came to € 31k in the 2018 financial year (2017: € 573k).

| **€ 000s** | **2018** | **2017** |
|---|---|---|
| **Present value of defined benefit obligation at 1 January** | **7,674** | **8,674** |
| Service cost | - | - |
| Interest cost | 120 | 130 |
| Actuarial losses (gains) | (73) | (865) |
| Due to changes in demographic assumptions | 91 | - |
| Due to changes in financial assumptions | (220) | (812) |
| Due to experience adjustments | 55 | (53) |
| Benefits paid | (268) | (265) |
| **Present value of defined benefit obligation at 31 December** | **7,453** | **7,674** |
| **Fair value of plan assets at 1 January** | **(1,749)** | **(1,541)** |
| Interest income | (30) | (25) |
| Income from plan assets excluding amounts included in net interest expenses and income | 32 | 16 |
| Payments from plan assets | - | - |
| Amounts paid out | 46 | 6 |
| Company contributions to plan assets | (206) | (205) |
| **Fair value of plan assets at 31 December** | **(1,907)** | **(1,749)** |
| **Pension provision at 31 December** | **5,545** | **5,924** |
| Discount factor | 1.79% | 1.58% |
| Rate of compensation increase | 2.00% | 2.00% |
| Pension indexation | 1.00% | 1.00% |

Expenses for plan assets excluding amounts included in interest income are reported under other comprehensive income.

The income and expenses recognised in the income statement for defined benefit plans are structured as follows:

| € 000s | 2018 | 2017 |
|---|---|---|
| **Pension expenses** | | |
| Service cost | - | - |
| Interest cost | 120 | 130 |
| Income from plan assets recognized through profit or loss | (30) | (25) |
| **Pension expenses** | **90** | **105** |

Pension payments of € 251k and funding contributions to plan assets of € 205k are expected in 2019.
If the aforementioned material assumptions used to measure pension obligations as of the balance sheet were to change by half a percent in each case, pension obligations would increase / decrease as follows:

| € 000s | Change in pension obligations | Pension obligations |
|---|---|---|
| Change in interest rate + 0.5% | (318) | 7,134 |
| Change in interest rate - 0.5% | 828 | 8,280 |

As of 31 December 2018, the weighted average term of the defined benefit obligation came to 14.7 years (2017: 15.9 years).
Employer contributions to defined contribution plans amounted to € 6,693k in the 2018 financial year (2017: € 6,801k).

## 29 OTHER PROVISIONS AND TAX PROVISIONS

### (a) Other provisions

| € 000s | Restructuring | Redundancy payments | Litigation risks | Dismantling | Other | Total |
|---|---|---|---|---|---|---|
| **Balance at 1 January 2018** | **1,238** | **5,092** | **279** | **3,031** | **779** | **10,419** |
| Added | - | 1,503 | 9 | 33 | - | 1,545 |
| Utilised | (1,238) | (3,830) | (81) | (164) | (213) | (5,526) |
| Reversed | - | (260) | (192) | - | (431) | (883) |
| Compounding | - | - | - | 22 | - | 22 |
| **Balance at 31 December 2018** | **-** | **2,505** | **15** | **2,922** | **135** | **5,577** |
| Long-term | - | - | - | 2,922 | - | 2,922 |
| Short-term | - | 2,505 | 15 | - | 135 | 2,655 |
| **Balance at 31 December 2018** | **-** | **2,505** | **15** | **2,922** | **135** | **5,577** |

**Restructuring.** Implementation of the restructuring plan adopted in 2016 was completed in 2018.

**Redundancy payments.** Provisions of € 1,503k were capitalised in 2018 for redundancy payments to employees. These provisions will be utilised in 2019. The estimated costs are based on the terms of the relevant agreements. As of the balance sheet date, the Company also still had obligations dating back to 2017 that will be utilised in 2019.

**Litigation risks.** The provisions of € 279k added for litigation risks in the previous year were utilised almost in full or reversed through profit or loss due to the discontinuation of or agreement reached concerning the underlying claim. As of the balance sheet date, QSC had provisions of just € 15k in connection with litigation risks (2017: € 279k).

**Dismantling.** The long-term provisions relate to provisions of € 2,922k for dismantling obligations for actively used central office surfaces and wireless local loop locations (2017: € 3,031k).

**Other.** Other short-term provisions mainly relate to provisions of € 135k for commission payments (2017: € 400k).

### (b) Tax provisions

| € 000s | Corporate income tax and solidarity surcharge | Trade tax | Total |
|---|---|---|---|
| **Balance at 1 January 2018** | **599** | **1,070** | **1,669** |
| Added | 511 | 535 | 1,046 |
| Utilised | (352) | (730) | (1,082) |
| Reversed | - | (2) | (2) |
| **Balance at 31 December 2018** | **758** | **873** | **1,631** |

## 30 TRADE PAYABLES AND OTHER LIABILITIES

| € 000s | 2018 | 2017 |
|---|---|---|
| **Long-term** | | |
| Trade payables | 100 | 1,640 |
| Other liabilities | 354 | 1,717 |
| **Long-term** | **454** | **3,357** |
| **Short-term** | | |
| Trade payables | 46,575 | 34,873 |
| Other liabilities | 11,467 | 12,023 |
| **Short-term** | **58,042** | **46,896** |

Long-term trade payables include expenses for trademark rights.

## 31 DEFERRED INCOME

QSC defers non-recurring income from the installation of customer lines on a periodic and pro-rated basis over a contract term of 24 months. Advance payments from customers are also deferred up to the date the service is provided.

## Notes to the Consolidated Cash Flow Statement

The cash flow statement is divided into three sections: operating, investing and financing activities. The cash flow from operating activities has been calculated using the indirect method. The financial liabilities included in the cash flow from financing activities refer to all liabilities due to banks. Interest income is recognised in the cash flow from operating activities, while interest payments are accounted for in the cash flow from financing activities. Tax payments are reported in their full amount in the cash flow from operating activities, as it is not possible to allocate these items to individual segments.

### 32 CASH FLOW FROM OPERATING ACTIVITIES

The cash flow from operating activities amounted to € 34,125k in the 2018 financial year and thus decreased by € 5,172k compared with the previous year.
This was due in particular to a year-on-year reduction in depreciation and amortisation, as well as to significantly lower income tax refunds compared with 2017.

### 33 CASH FLOWS FROM INVESTING ACTIVITIES AND FINANCING ACTIVITIES

The cash flow from investing activities came to € -17,701k in the 2018 financial year (2017: € -21,799k). The improvement compared with the previous year was chiefly due to a lower volume of outgoing payments for the purchase of property, plant and equipment.
The cash flow from financing activities amounted to € -24,687k in the 2018 financial year (2017: € -23,398k). This outflow of funds mainly resulted from loan repayments of € -81,411k (2017: € -12,820k), which significantly exceeded the taking up of new loans of € 65,000k (2017: € 0k), interest paid of € -4,253k (2017: € -5,507k) and the dividend distribution of € -3,725k resolved by the Annual General Meeting (2017: € -3,725k).
Financial liabilities developed as follows:

| € 000s | 31 Dec. 2017 | Cash-effective changes | Non-cash-effective changes | | 31 Dec. 2018 |
|---|---|---|---|---|---|
| | | | Reclassifications | Fair value | |
| **Financial liabilities** | | | | | |
| Long-term loans | 135,130 | (16,130) | (19,000) | - | 100,000 |
| Short-term loans | 281 | (281) | 19,000 | - | 19,000 |
| Lease liabilities | 371 | (295) | - | - | 76 |
| Assets to secure long-term loans | (931) | - | - | 719 | (212) |
| **Financial liabilities** | **134,851** | **(16,706)** | **-** | **719** | **118,864** |

# Other Disclosures

## 34 SUBSIDIARIES

The consolidated financial statements include the following companies:

| € 000s | Shareholdings in % | Equity 31 Dec. 2018 | Net income 2018 |
|---|---|---|---|
| **Subsidiary, headquarters, country** | | | |
| **(Disclosures as per HGB annual financial statements)** | | | |
| Plusnet GmbH, Cologne, Germany | 100.00 | 186,930 | 5[1] |
| Ventelo GmbH, Cologne, Germany | 100.00 | 142,238 | -[2,5,7] |
| Plusnet Infrastruktur GmbH & Co. KG, Cologne, Germany | 100.00 | 3,780 | -[3,6] |
| Plusnet Verwaltungs GmbH, Cologne, Germany | 100.00 | 27 | 1[4] |
| BroadNet Deutschland GmbH, Cologne, Germany | 100.00 | 3,757 | 15[2,7,8] |
| IP Colocation GmbH, Cologne, Germany | 100.00 | 2,922 | 304 |
| Q-DSL home GmbH, Cologne, Germany | 100.00 | 1,293 | -[2,7] |
| 010090 GmbH, Cologne, Germany | 100.00 | 156 | -[2,7] |
| 01012 Telecom GmbH, Cologne, Germany | 100.00 | 27 | -[2,7] |
| Broadnet Services GmbH, Cologne, Germany | 100.00 | 25 | -[2,7] |
| 01098 Telecom GmbH, Cologne, Germany | 100.00 | 25 | -[2,7] |
| 010052 Telecom GmbH, Cologne, Germany | 100.00 | 25 | -[2,7] |
| 010088 Telecom GmbH, Cologne, Germany | 100.00 | 25 | -[2,7] |
| 01052 Communication GmbH, Cologne, Germany | 100.00 | 25 | -[2,7] |
| Q-loud GmbH, Cologne, Germany | 100.00 | 399 | (1,391) |
| T&Q Netzbetriebs GmbH & Co. KG, Cologne, Germany | 100.00 | 25 | 50[2] |
| T&Q Verwaltungs GmbH, Cologne, Germany | 100.00 | 43 | 2[9] |
| F&Q Netzbetriebs GmbH & Co. KG, Cologne, Germany | 100.00 | (14) | (15)[2] |
| F&Q Netzbetriebs Verwaltungs GmbH, Cologne, Germany | 100.00 | 36 | 2[10] |
| fonial GmbH, Cologne, Germany | 74.90 | (3,108) | (962)[2] |
| T&Q Netz GmbH & Co. KG, Dusseldorf, Germany | 50.00 | - | -[9] |

[1] Profit transfer agreement with QSC AG since 1 January 2018 – § 264 (3) HGB drawn on for this company.
[2] Shares held by Plusnet GmbH.
[3] Shares held by Ventelo GmbH.
[4] Shares held by Plusnet Infrastruktur GmbH & Co. KG.
[5] § 264 (3) HGB drawn on for this company.
[6] § 264b HGB drawn on for this company.
[7] Profit transfer agreement with Plusnet GmbH.
[8] Profit transfer agreement not executed due to § 301 AktG.
[9] Shares held by T&Q Netzbetriebs GmbH & Co. KG.
[10] Shares held by F&Q Netzbetriebs GmbH & Co. KG.

For all of its subsidiaries, the control exercised by QSC is attributable to its share of voting rights.

## 35 SEGMENT REPORTING

In accordance with the provisions of IFRS 8, the basis for identifying segments consists of the Company's internal organisational structure as used by corporate management for business administration decisions and performance assessments.
This results in the following segments: Cloud, Outsourcing, Consulting and Telecommunications.

**Cloud.** QSC pools all activities relating to its Pure Enterprise Cloud (PEC) and the Internet of Things (IoT) in its Cloud segment. The Pure Enterprise Cloud, which has been developed on an in-house basis since 2015, comprises a modular system of cloud technologies, software solutions and service components, as well as network and infrastructure services. Furthermore, the Cloud segment also includes the IoT business activities pooled at Q-loud. This subsidiary of QSC offers companies an extensive range of products and services enabling them to network appliances and implement digital business models in the Internet of Things. Its end-to-end range of services includes transformation consulting, software and hardware competence, standard hardware, a proprietary IoT platform, security solutions and smart product manufacturing.

**Outsourcing.** This segment offers traditional outsourcing services to companies wishing to outsource their IT and data storage to QSC. As soon as cloud-based outsourcing services are provided, the respective revenues are allocated to the Cloud segment. As well as IT service offerings, the Outsourcing segment also includes the underlying IP-VPNs necessary to guarantee end-to-end quality.

**Consulting.** QSC advises companies on how to optimise their business processes with two key focuses on SAP and Microsoft. As an SAP full-service provider, in this segment QSC performs services in the fields of basic operations, application management, implementation, user support and maintenance, as well as in managing the necessary software licenses. The Microsoft consulting services range from needs analysis to consulting, design and implementation services through to operations and ongoing optimisation measures.

**Telecommunications (TC).** Here, QSC offers a broad range of voice and data communication solutions. These include internet connections with asymmetric ADSL2+ lines, symmetric SDSL lines and premium internet access via wireless local loop (WLL) networks. In this segment, QSC also offers All-IP telephony connections (voice over IP) and corresponding telephony systems. Furthermore, the range of services also includes further forms of voice telephony, including open call-by-call and preselect offerings and value added services.

| € 000s | Telecom-munications | Outsourcing | Consulting | Cloud | Group |
|---|---|---|---|---|---|
| **2018 financial year** | | | | | |
| **Net revenues** | **200,911** | **91,033** | **38,394** | **36,505** | **366,843** |
| Cost of revenues | (147,204) | (73,866) | (31,528) | (24,067) | (276,665) |
| **Gross profit** | **53,707** | **17,167** | **6,866** | **12,438** | **90,178** |
| Sales and marketing expenses | (14,505) | (5,618) | (1,420) | (6,757) | (28,300) |
| **Segment contribution** | **39,202** | **11,549** | **5,446** | **5,681** | **61,878** |
| General and administrative expenses | | | | | (27,508) |
| Depreciation and amortisation (including non-cash share-based compensation) | | | | | (26,919) |
| Other operating income and expenses | | | | | 1,024 |
| **Operating profit (EBIT)** | | | | | **8,475** |
| Financial income | | | | | 138 |
| Financial expenses | | | | | (4,504) |
| **Net income before income taxes** | | | | | **4,109** |
| Income taxes | | | | | (833) |
| **Net income** | | | | | **3,276** |

| € 000s | Telecom-munications | Outsourcing | Consulting | Cloud | Group |
|---|---|---|---|---|---|
| **2017 financial year** | | | | | |
| **Net revenues** | **188,736** | **101,951** | **39,407** | **27,773** | **357,867** |
| Cost of revenues | (132,722) | (78,385) | (32,865) | (22,118) | (266,090) |
| **Gross profit** | **56,014** | **23,566** | **6,542** | **5,655** | **91,777** |
| Sales and marketing expenses | (14,526) | (6,276) | (1,187) | (5,177) | (27,166) |
| **Segment contribution** | **41,488** | **17,290** | **5,355** | **478** | **64,611** |
| General and administrative expenses | | | | | (27,040) |
| Depreciation and amortisation (including non-cash share-based compensation) | | | | | (31,148) |
| Other operating income and expenses | | | | | 686 |
| **Operating profit (EBIT)** | | | | | **7,109** |
| Financial income | | | | | 247 |
| Financial expenses | | | | | (4,658) |
| **Net income before income taxes** | | | | | **2,698** |
| Income taxes | | | | | 2,425 |
| **Net income** | | | | | **5,123** |

The segment contribution is the key segment performance indicator referred to by the management. This is defined as EBITDA before general and administrative expenses and other operating income and expenses. For income statement purposes, the cost of revenues is thus allocated in full to the respective segment, as are sales and marketing expenses. The direct and indirect allocation of costs to individual segments is consistent with internal reporting and management structures.
Indirect cost allocation is primarily based on resource utilisation by the respective segments.
The Management Board does not receive any regular information about segment-specific capital expenditure, assets and liabilities, general and administrative expenses, depreciation and amortisation and other operating income and expenses as components of the respective segment earnings figures.
Revenues include € 18,339k generated with non-German EU customers (mainly Belgium: € 7,712k; UK: € 3,450k; Netherlands: € 3,431k; Austria: € 1,319k) and € 3,228k with non-EU customers (mainly USA: € 1,654k). All other revenues were generated in Germany.

## 36 STOCK OPTION PLANS

Since 1999, QSC has incepted a total of eight stock option plans providing for the issue of convertible bonds with a nominal amount of € 0.01 each to employees, Management Board members, advisors and suppliers. Convertible bonds are allocated by the Management Board, which additionally required the consent of the Supervisory Board for allocations to advisors and suppliers. The Supervisory Board alone decides on allocations to members of the Management Board of QSC AG.
Participants in these plans are entitled to subscribe convertible bonds in return for payment of the nominal amount of € 0.01 and to convert each convertible bond into a no-par registered share in return for payment of the exercise price. The exercise price for the convertible bond corresponds to the stock market price of the share on the issue date. The convertible bonds have an eight-year term and are subject to a four-year lockup period following subscription.
As of the balance sheet date on 31 December 2018, the SOP 2006, SOP 2012 and SOP 2015 plans were active.
Convertible bonds outstanding within the SOP 2006 plan may only be converted until May 2019 at the latest. The conversion right provided for by the SOP 2006 plan may only be exercised if at least one of the following conditions is met: the stock market price of the share has outperformed the comparative TecDAX index in relative terms between subscription of the convertible bond and exercising of the conversion right or the stock market price of the share has risen by at least 10% between subscription of the convertible bond and exercising of the conversion right.
Convertible bonds allocated within the SOP 2012 plan were eligible for subscription for the last time on 15 May 2017. Subscriptions within the SOP 2015 plan, which is solely available to Management Board members, are still possible until 26 May 2020. However, no new convertible bonds were allocated in the 2018 financial year.

The conversion right provided for by the SOP 2012 and 2015 plans may only be exercised at the earliest after the expiry of a four-year waiting period and only if at least one of the following two conditions is met: the share price is at least 20% higher than the conversion price or the share has outperformed the TecDAX in relative terms since the subscription date.
No personnel expenses have been recognised pursuant to IFRS 2 for the convertible bonds resulting from the 2000, 2000A, 2001 and 2002 SOP plans, none of which is now utilisable.
No option values had to be calculated in the 2017 and 2018 financial years for the SOP 2006 and 2015 plans.
The option values for the convertible bonds issued in the SOP 2012 plans were determined as of the grant date, and most recently in the 2017 financial year, using the Black-Scholes option pricing model. Reference was made to the following assumptions.

| | 2018 | 2017 |
|---|---|---|
| **SOP 2012** | | |
| Expected average term of the SOP 2012 | - | 8 years |
| Average risk-free interest rate | - | 0.08% |
| Volatility (1 year) | - | 38.47% |
| Average fair value of options in € | - | 0.73 |
| Fair value of convertible bonds granted for the year in € | - | 521,210 |

Volatility was determined on the basis of daily closing prices over a historical period of twelve months.
The distribution of the convertible bonds outstanding under all plans as of 31 December 2018 and 31 December 2017 is as follows:

| | Number of convertible bonds | Weighted average exercise price in € |
|---|---|---|
| **Outstanding at 31 December 2016** | **3,207,529** | **2.30** |
| Newly issued in 2017 | 718,200 | 1.76 |
| Lapsed in 2017 | (127,500) | 2.00 |
| Exercised in 2017 | - | - |
| **Outstanding at 31 December 2017** | **3,798,229** | **2.21** |
| Newly issued in 2018 | - | - |
| Lapsed in 2018 | (233,900) | 2.29 |
| Exercised in 2018 | - | - |
| **Outstanding at 31 December 2018** | **3,564,329** | **2.20** |

No convertible bonds could be subscribed in the 2018 financial year.
The exercise prices of the remaining 3,564,329 convertible bonds outstanding range from € 1.10 to € 4.59, while the remaining term for exercising them ranges from directly exercisable through to 14 May 2025 at the latest. The exercise price is set upon subscription and cannot be changed subsequently. Depending on the development in its share price, the Company expects the outstanding convertible bonds to be converted at the latest by 2025.
As of the balance sheet date on 31 December 2018, the agreed four-year lockup period had expired for a total of 1,926,929 of the outstanding convertible bonds; however, these bonds could not be exercised as the underlying terms had not been fully met.
In the 2018 financial year, expenses of € 332k were incurred for non-cash share-based compensation (2017: € 570k).

## 37 RELATED PARTY TRANSACTIONS

**Compensation of members of the management in key positions.** The compensation of members of the management in key positions comprises:

| € 000s | 2018 | 2017 |
|---|---|---|
| **Compensation of management members** | | |
| Short-term benefits | 1,290 | 2,308 |
| Post-employment benefits | - | - |
| Other long-term benefits | 431 | (458) |
| Termination benefits | 4 | 942 |
| Share-based compensation | 61 | 199 |
| **Compensation of management members** | **1,786** | **2,991** |

Compensation of members of the management in key positions (members of the Management and Supervisory Boards) includes salaries, expense reimbursements, settlements, benefits in kind and expenses incurred for stock option plans.
Other long-term benefits relate to the claim to variable compensation resulting from the multi-year targets agreed for the Management Board.
Of the amount of € 431k reported for the 2018 financial year, € 275k relates to the multiyear targets for the 2018 to 2020 assessment period and € 156k relates to the increase in the claim to compensation on the part of Management Board members for the 2015 to 2017 assessment period resolved by the Supervisory Board in May 2018.
The amount reported for the previous year relates to the variable compensation claim for the 2015 to 2017 assessment period, which was determined at the end of the 2017 financial year and amounted to € 419k. For the 2015 and 2016 financial years, QSC had initially reported a total amount of € 877k based on preliminary calculations.

**Transactions with members of the management in key positions.** The Management Board members active at the end of the 2018 financial year hold voting rights for 640,000 shares. Supervisory Board members have a total of 31,107,394 shares, corresponding to around 25.05% of voting rights.
In 2018, QSC maintained business relations with companies in which members of its own Management and Supervisory Boards act as shareholders. IAS 24 states that individuals or companies constitute related parties when one of the parties has the possibility of controlling or exercising significant influence over the other party. All contracts with these companies require Supervisory Board approval and are concluded on customary market terms.
Members of QSC's Management and Supervisory Boards are shareholders in the following companies:

| € 000s | Net revenues | Expenses | Payments received | Payments made |
|---|---|---|---|---|
| **2018 financial year** | | | | |
| IN-telegence GmbH | 179 | 136 | 235 | 160 |
| Teleport Köln GmbH | 13 | 1 | 16 | 2 |
| QS Communication Verwaltungs Service GmbH | - | 179 | - | 208 |
| **2017 financial year** | | | | |
| IN-telegence GmbH | 262 | 115 | 346 | 125 |
| Teleport Köln GmbH | 16 | 1 | 20 | 2 |
| QS Communication Verwaltungs Service GmbH | - | 154 | - | 203 |

| € 000s | Receivables | Payables |
|---|---|---|
| **31 December 2018** | | |
| IN-telegence GmbH | 16 | 13 |
| Teleport Köln GmbH | 3 | - |
| QS Communication Verwaltungs Service GmbH | - | 16 |
| **31 December 2017** | | |
| IN-telegence GmbH | 38 | 12 |
| Teleport Köln GmbH | 3 | - |
| QS Communication Verwaltungs Service GmbH | - | 12 |

IN-telegence GmbH is a provider of value added services in the telecommunications industry and mainly draws on network services from QSC. Subsidiaries of QSC AG also draw on a low volume of value added services from IN-telegence. Teleport Köln GmbH supports QSC in installing end customer connections and also draws on QSC's telecommunications services. QS Communication Verwaltungs Service GmbH advises QSC in the development of concepts and software for cloud-based services.

## 38 DEFERRED AND CURRENT TAXES

QSC used an aggregate tax rate of 32.52% to calculate deferred taxes (2017: 32.40%). The deferred tax expenses and income for the period and the allocation of temporary differences are presented below:

| € 000s | Assets | Liabilities | Assets | Liabilities | Consolidated income statement | |
|---|---|---|---|---|---|---|
| | 2018 | 2018 | 2017 | 2017 | 2018 | 2017 |
| **Deferred tax assets and liabilities** | | | | | | |
| Intangible assets | 1 | 6,177 | 546 | 7,114 | 392 | 570 |
| Property, plant and equipment | 1,324 | 1,144 | 1,292 | 1,456 | 343 | (363) |
| Other assets | 582 | - | 597 | - | (15) | 149 |
| Other receivables | 4,524 | 353 | 2,000 | 797 | 2,422 | (1,199) |
| Inventories | - | - | 324 | - | (324) | 249 |
| Deferred income | - | 215 | - | 226 | 11 | 127 |
| Accrued pensions and other provisions | 1,260 | 44 | 1,635 | - | (408) | 748 |
| Change in market price of derivatives | 218 | - | 524 | - | 39 | 46 |
| Other liabilities | 38 | 5,082 | 117 | 3,198 | (1,417) | 914 |
| **Total deferred taxes on temporary differences** | **7,947** | **13,015** | **7,035** | **12,791** | **1,043** | **1,242** |
| **Total deferred taxes on loss carryovers** | **13,133** | **-** | **13,170** | **-** | **(37)** | **1,602** |
| **Total deferred taxes before netting** | **21,080** | **13,015** | **20,205** | **12,791** | | |
| Netting | 12,663 | 12,663 | 12,399 | 12,399 | | |
| **Total deferred taxes** | **8,417** | **352** | **7,806** | **392** | | |

The temporary differences in conjunction with interests in subsidiaries for which no deferred tax liabilities are recognised amounted to € 8,705k in the 2018 financial year (2017: € 3,545k).

The following table presents the reconciliation of the expected income tax expenses to the actual income tax expenses. The expected income tax expenses are calculated by multiplying earnings before taxes with the assumed tax rate.

| € 000s | 2018 | 2017 |
|---|---|---|
| **Reconciliation** | | |
| **Net income before income taxes** | **4,109** | **2,698** |
| Tax rate | 32.52% | 32.40% |
| | | |
| Expected tax expenses | 1,336 | 874 |
| Tax effects of | | |
| Changes in write-downs of deferred taxes recognised for loss carryovers | (14) | (3,001) |
| Non-deductible operating expenses | 287 | 339 |
| Non-period income | (749) | (537) |
| Changes in tax rates | (33) | (35) |
| Other items | 6 | (65) |
| **Reconciled tax expenses** | **833** | **(2,425)** |

Reconciled tax expenses consist of € 1,839k for current income tax expenses (of which: € 595k for current income tax expenses relating to previous years) and € 1,006k for deferred tax income (2017: € 2,844k). Tax expenses of € 355k were recognised directly in equity in the 2018 financial year in connection with actuarial gains and losses and remeasurements of derivative financial instruments (2017: tax expenses of € 581k).

As of 31 December 2018, corporate income tax loss carryovers at QSC AG came to € 362 million (2017: € 370 million) while trade tax loss carryovers totalled € 349 million (2017: € 356 million). These tax losses can basically be offset to an unlimited extent against future taxable income at those companies at which deferred tax assets totalling € 13.1 million have been recognised on loss carryovers relating to QSC AG (2017: € 13.2 million for QSC AG). In recognising and measuring deferred tax assets on tax loss carryovers, it is assumed that tax loss carryovers totalling € 39.2 million can be used on the level of QSC AG for corporate income tax purposes in the medium term (2017: € 39.0 million for QSC AG).

For trade tax purposes, it is assumed that trade tax loss carryovers totalling € 41.8 million can be used on the level of QSC AG in the medium term (2017: € 42.2 million for QSC AG).

The Company's medium-term planning provides for the sustainable generation of taxable income. Given historical developments and the planning uncertainties resulting from the transformation process at the group of companies, however, only that portion of taxable income expected in a foreseeable period of three years has been accounted for (2017: three years). No deferred tax assets have been recognised in the balance sheet for remaining corporate income tax and trade tax loss carryovers not yet used.

## 39 LEGAL DISPUTES

Neither QSC AG nor its group companies are involved in any court or arbitration proceedings that could materially impact on their economic position.

## 40 LEASES AND FUTURE PAYMENT OBLIGATIONS

**Leases (QSC as lessee).** The companies included in consolidation are party to various operating lease arrangements as lessee, mostly for technical space and offices, technical equipment and vehicles.
The Company concludes partial amortisation agreements without purchase options or price indexing clauses but with extension options in some cases and an average lease term of two to five years.
As of 31 December, future minimum lease payments under non-cancellable operating leases were as follows:

| € 000s | 2018 | 2017 |
|---|---|---|
| **Operating lease arrangements** | | |
| Up to 1 year | 31,303 | 12,171 |
| 1 to 5 years | 45,364 | 20,265 |
| Over 5 years | 2,813 | 3,395 |
| **Operating lease arrangements** | **79,479** | **35,831** |

In the 2018 financial year, QSC recognised expenses of € 12,321k for operating leases (2017: € 8,380k). These have been reported under cost of revenues and general and administrative expenses.

**Leases (QSC as lessor) – operating leases.** Arrangements similar to operating leases are in place with customers, mainly for the rental of data centre space, disk storage devices and shared hardware resources. The Company concludes partial amortisation agreements without purchase options or price indexing clauses and an average lease term of three to five years (with extension options in some cases). The Company will receive the following future minimum lease payments under the non-cancellable components of operating lease arrangements:

| € 000s | 2018 | 2017 |
|---|---|---|
| **Operating lease arrangements** | | |
| Up to 1 year | 27,714 | 27,509 |
| 1 to 5 years | 41,654 | 42,928 |
| Over 5 years | 17,884 | 1,816 |
| **Operating lease arrangements** | **87,253** | **72,253** |

To measure future minimum lease payments, all customers were taken into account to whom services were already provided at the reporting date and from whom payments were already contractually agreed at the balance sheet date. In 2018, an amount of € 28,776k (2017: € 29,197k) was recognised under revenues as rental payments.

**Leases (QSC as lessor) – finance leases.** Pursuant to IFRIC 4 requirements, QSC is also deemed to be the lessor in specific multiple element arrangements. Future minimum lease payments from customers under finance lease arrangements can be reconciled to their present value as follows:

| € 000s | 2019 | 2020–2022 | from 2023 | Total |
|---|---|---|---|---|
| **Minimum lease payments receivable in future** | | | | |
| Lease payments | 906 | 1,653 | - | 2,559 |
| Discounted amounts | (15) | (13) | - | (28) |
| **Present values** | **891** | **1,640** | **-** | **2,531** |

Lease payments received in 2018 totalled € 2,488k (2017: € 4,443k).

**Purchase commitments.** Purchase commitments for future investments amounted to € 3,111k as of the balance sheet date (2017: € 1,914k) and mainly involved purchase orders for property, plant and equipment.

## 41 OBJECTIVES AND METHODS USED IN FINANCIAL RISK MANAGEMENT AND CAPITAL MANAGEMENT

In connection with its business activities, QSC is exposed to a number of financial risks that are intrinsically linked with entrepreneurial activity. QSC combats these risks with a comprehensive risk management system, which is an integral component of its business processes and corporate decisions. The key elements of this system are a Group-wide planning and controlling process, Group-wide policies and reporting systems, as well as Group-wide risk reporting. The Management Board lays down the principles of the Company's financial policies annually and monitors these within the risk management system. Further information about risk management can be found in the Group Management Report.

Financial liabilities mainly comprise trade payables and liabilities due to banks. The main purpose of these financial liabilities is to finance the Company's operating activities. Financial assets directly resulting from business activities relate in particular to trade receivables and cash and cash equivalents. No derivatives were traded in the 2018 financial year.

The main risks to which QSC is exposed due to its use of financial instruments include interest rate risk, credit risk and liquidity risks. Since no material transactions are executed in foreign currencies, there are no material foreign currency risks. There were no material risk clusters in the past financial year. The strategies and procedures used to manage these risks are presented below.

**Market interest risk.** QSC is exposed to the risk of changes in market interest rates. This risk results from the Company's floating-interest short-term liabilities due to banks, as well as from floating-interest liquidity. As of 31 December 2018, floating-rate financial liabilities accounted for 63.3% of total financial liabilities.

The promissory note bond had a total volume of € 54,000k as of 31 December 2018 (an amount of € 81,000k was repaid in 2018). It comprises three tranches with terms of five and seven years and is subject to floating interest rates (€ 11,000k in one tranche) and fixed interest rates (€ 43,000k in two tranches). To hedge the interest rate risk, in parallel with the placement of the original promissory note bond QSC also concluded three interest swaps with nominal volumes totalling € 87,500k and identical terms running until 20 May 2019 (nominal: € 76,500k) and 20 May 2021 (nominal: € 11,000k).

Following the premature repayment of the bond tranches, only the interest swap with a term running until 20 May 2021 (nominal: € 11,000k) now meets IAS 39 hedge accounting requirements (cash flow hedges). Hedge accounting continues to be based on IAS 39, as QSC as exercised the corresponding option provided for in IFRS 9. In respect of its term and floating interest rate, this interest swap is congruent with the tranche of the promissory note bond thereby hedged. The underlying effectiveness assessment is performed as of each balance sheet date using the hypothetical derivative method.

The negative fair value of all interest swaps amounted to € 672k as of the balance sheet date (2017: € 1,617k) and, in line with the respective maturities, has been recognised under other long-term or short-term financial liabilities. The fair value measurement of the interest swaps was performed by the intermediary bank. This is derived either from the mid-market price or, when expressed as a bid and asked price, from the indicative price at which the bank would have terminated and concluded or bought back and sold the financial instrument on the relevant marketplace at the close of business on the respective measurement date. To account for the change in the value of the interest swap before deferred taxes an amount of € 1,063k was recognised under OCI in the consolidated statement of comprehensive income in the 2018 financial year (2017: € 945k). This item resulted on the one hand from direct recognition of the change in the value of the cash flow hedge and on the other from the reversal of the hedge relationship for those swaps no longer meeting IAS 39 requirements.

An amount of € 24k was recognised for cash flow hedge ineffectiveness in the income statement in the period under report (2017: € 135k). The payments expected for the hedge include interest payments for the hedged item and the hedge relationship. These are incurred on an ongoing basis over the term and recognised under interest expenses.

The interest swap enables the cash flows from the tranche of the hedged item with a floating interest rate to be fully hedged throughout the respective term with regard to interest rate risk. Accounting for the hedge, QSC thus de facto pays fixed interest of 2.935% on the floating-rate tranche of the promissory note bond, as a result of which changes in market interest rates do not have any net impact on the Company's interest expenses. However, any change in the level of interest rates by +/-100 base points would change the fair value of the hedge instruments by € 222k and € -230k respectively. In the statement of comprehensive income, this would impact on the volume of income offset against equity and thus on shareholders' equity.

For the other two swaps, any change in the level of interest rates by +/-100 base points would have changed the fair value by € 51k and € -51k respectively. These amounts would have been credited or charged to earnings in the income statement.

Furthermore, QSC has committed credit lines from a syndicated loan agreement concluded on 11 March 2016. This revolving credit facility has an amount of € 70,000k and a term running until 11 March 2021. On 5 July 2018, the lending commitment under this contract was increased by € 30,000k without any change to the remaining term. As of the balance sheet date, two amounts cumulatively totalling € 65,000k had been drawn down. The interest rate amounts to Euribor plus a margin linked to the Company's financial and earnings position.

The following table presents the sensitivity of consolidated earnings before taxes to any reasonably possible change in interest rates in respect of floating-rate liquidity as of 31 December 2018:

| | Increase/decrease in base points | Impact on earnings before taxes € 000s |
|---|---|---|
| 2018 | + 100 | 41 |
| 2018 | - 100 | (54) |
| 2017 | + 100 | 330 |
| 2017 | - 100 | (6) |

**Credit risk.** QSC is exposed to the risk of payment defaults on the part of customers and issuers. The Company makes efforts to ensure that it only enters into business dealings with creditworthy customers and thus attempts to exclude this risk from the outset. To this end, creditworthiness checks are performed before the respective contract is concluded. Once business relations have been initiated, receivables balances are monitored to reduce potential default risks. Maximum default risks are limited to the carrying amounts of the receivables disclosed in Note 18. QSC expects non-impaired receivables to be collectible.

**Liquidity risk.** QSC monitors its risk of a liquidity shortfall with monthly liquidity planning. This accounts for the remaining terms of available financial assets and the expected cash flows from operating activities. The Company aims to maintain a balance between ensuring permanent availability of liquidity and safeguarding its flexibility by drawing on short and long-term liabilities and financing arrangements.
With regard to the promissory note bond in place at the balance sheet date, due to the full hedging of interest rate risks with opposing interest swaps (cash flow hedge), QSC has to pay de facto fixed interest of € 1,490k per annum for the period through to 2019 and € 1,055k per annum thereafter. QSC intends to uphold the hedge relationship through to the maturity of the respective hedged items and hedge instruments. The expected cash flows for the hedged promissory note bond therefore involve ongoing interest payments and repayment of the liabilities for the underlying instruments upon their respective maturities. The cash flows for the underlying and hedge transactions have therefore been presented jointly in the chart below.
The interest expenses for the syndicated loan are linked to the development in the Euribor rate. This resulted in interest expenses of € 1,078k per annum as of 31 December 2018.
As of 31 December 2018, short-term and long-term financial liabilities had the following maturities. These disclosures are based on the expected undiscounted payments.

| € 000s | Carrying amount | Due by end of 2019 | Due by end of 2020 | Due by end of 2021 | Due by end of 2022 | Due by end of 2023 | Due after 2023 | Total |
|---|---|---|---|---|---|---|---|---|
| Liabilities under financing and finance lease arrangements | 76 | 76 | - | - | - | - | - | 76 |
| Trade payables | 46,675 | 46,575 | 100 | - | - | - | - | 46,675 |
| Liabilities due to banks | 119,937 | 22,236 | 2,132 | 100,818 | - | - | - | 125,186 |
| Interest swaps, cash flow hedge* | 354 | - | - | - | - | - | - | - |
| Interest swaps, other | 318 | 318 | - | - | - | - | - | 318 |
| Other short-term and long-term financial liabilities | 2,559 | 2,526 | 8 | - | 8 | 4 | 13 | 2,559 |
| **At 31 December 2018** | **169,919** | **71,732** | **2,241** | **100,818** | **8** | **4** | **13** | **174,815** |

| € 000s | Carrying amount | Due by end of 2018 | Due by end of 2019 | Due by end of 2020 | Due by end of 2021 | Due by end of 2022 | Due after 2022 | Total |
|---|---|---|---|---|---|---|---|---|
| Liabilities under financing and finance lease arrangements | 371 | 306 | 76 | - | - | - | - | 382 |
| Trade payables | 36,513 | 34,873 | 1,640 | - | - | - | - | 36,513 |
| Liabilities due to banks | 136,412 | 3,541 | 101,980 | 982 | 35,367 | - | - | 141,869 |
| Interest swaps, cash flow hedge* | 1,617 | - | - | - | - | - | - | - |
| Other short-term and long-term financial liabilities | 755 | 718 | 4 | 8 | - | 8 | 17 | 755 |
| **At 31 December 2017** | **175,668** | **39,438** | **103,700** | **990** | **35,367** | **8** | **17** | **179,519** |

* As well as the corresponding balance sheet line items, “Liabilities due to banks” also includes interest swaps.

**Capital management.** The primary objective of QSC's capital management is to ensure sufficient equity, a strong credit rating and the ability to maintain its business operations in an independent and flexible manner. Capital is monitored by reference to the following key figures: equity ratio and net liquidity. The equity ratio is calculated by dividing equity by total assets. Net liquidity corresponds to interest-bearing liabilities less cash and cash equivalents (excluding cash and cash equivalents at the disposal group).

| € 000s | 2018 | 2017 |
|---|---|---|
| **Capital management** | | |
| Liabilities under financing and finance lease arrangements | (76) | (371) |
| Liabilities due to banks | (119,937) | (136,412) |
| **Interest-bearing liabilities** | **(120,013)** | **(136,783)** |
| Plus cash and cash equivalents | 53,618 | 61,881 |
| Plus assets held for sale | - | - |
| **Net liquidity** | **(66,395)** | **(74,902)** |
| Shareholders' equity | 90,161 | 89,528 |
| Total assets | 283,595 | 297,084 |
| **Equity ratio** | **32%** | **30%** |

## 42 FINANCIAL INSTRUMENTS

**Disclosures on the balance sheet.** Given that the carrying amounts largely correspond to fair values, no separate disclosures have been made on the respective fair values. This does not apply for the promissory note bond and syndicated loan included under other financial liabilities, for which the fair value exceeded its carrying amount by € 1.1 million as of 31 December 2018.

| € 000s | Carrying amount | Amortised cost | Fair value – in equity | Fair value – hedging instruments | Fair value – through profit or loss | Other financial liabilities |
|---|---|---|---|---|---|---|
| **31 December 2018** | | | | | | |
| **Assets not measured at fair value** | | | | | | |
| Cash and cash equivalents | 53,618 | x | | | | |
| Long-term trade receivables | 1,953 | x | | | | |
| Short-term trade receivables | | x | 56,057 | | | |
| **Liabilities measured at fair value** | | | | | | |
| Interest swaps – hedge accounting | 354 | | | x | | |
| Interest swaps – other | 318 | | | | x | |
| **Liabilities not measured at fair value** | | | | | | |
| Trade payables and other liabilities | 49,198 | | | | | x |
| Other financial liabilities | (120,048) | | | | | x |

| € 000s | Carrying amount | At amortised cost (2017: Loans and receivables) | Fair value – hedging instruments | Other financial liabilities |
|---|---|---|---|---|
| **31 December 2017** | | | | |
| **Assets not measured at fair value** | | | | |
| Cash and cash equivalents | 61,881 | x | | |
| Long-term trade receivables | 2,461 | x | | |
| Short-term trade receivables | 52,278 | x | | |
| **Liabilities measured at fair value** | | | | |
| Interest swaps – hedge accounting | 1,617 | | x | |
| **Liabilities not measured at fair value** | | | | |
| Trade payables and other liabilities | 37,330 | | | x |
| Other financial liabilities | 136,820 | | | x |

**Fair value disclosures for instruments with recurring measurement.** At the end of each reporting period, QSC AG ascertains whether any reclassifications are required between the levels of the measurement hierarchy. No reclassifications were made in the reporting period from 1 January 2018 to 31 December 2018.

| Class | Measurement hierarchy level | Carrying amount in € 000s at 31 Dec. 2018 | Fair value in € 000s at 31 Dec. 2018 | Description of measurement method |
|---|---|---|---|---|
| Short-term trade receivables | 2 | 56,057 | 56,057 | Trade receivables in the FVOCI category are based on individual allowances. |
| Long-term trade receivables | 2 | 1,953 | 1,953 | The receivables are measured by first forecasting the expected cash flows based on the provisions of the contract and then discounting these to account for risk. The fair values approximate to the carrying amounts. |
| Other financial liabilities | 2 | 120,048 | 120,948 | The other financial liabilities reported here relate almost exclusively to liabilities due to banks. The liability is measured by first forecasting the expected cash flows based on the provisions of the contract and then discounting these to account for risk. The risk-adjusted discount rate comprises an interbank interest rate (6M Euribor) and a QSC-specific risk premium derived from credit default swap rates for a peer group. The peer group has a BBB rating. |
| Interest swaps – with and without hedge accounting | 2 | 354 | 354 | The fair value of interest derivatives is determined on the basis of present value models including market information (interest structure curves). The fair value measurement of interest swaps was performed by the intermediary bank; the fair value is derived either from the mid-market price or, if expressed as a bid and ask price, from the indicative price at which the bank would have bought back and sold the financial instrument at the close of business on the relevant marketplace on the respective measurement date. |
| Interest swaps – without hedge accounting | 2 | 318 | 318 | |

**Disclosures on the consolidated income statement.** The following interest income and expenses and the following net gains and losses on financial instruments are included in the consolidated income statement.

| € 000s | Interest income/interest expenses | Fair value change | Impairments | Payments received on retired receivables | Net result 2018 | Net result 2017 |
|---|---|---|---|---|---|---|
| Loans and receivables | 109 | - | (493) | 49 | (335) | 357 |
| Other financial liabilities | | | | | | |
| not measured at fair value | (3,057) | - | - | - | (3,057) | (2,673) |
| Fair value – hedging instruments | (1,009) | (24) | - | - | (1,033) | (1,231) |
| Fair value – through profit or loss | (96) | - | - | - | (96) | - |

| € 000s | Interest income/interest expenses | Fair value change | Impairments | Payments received on retired receivables | Net result 2017 | Net result 2016 |
|---|---|---|---|---|---|---|
| Loans and receivables | 113 | - | 201 | 43 | 357 | 214 |
| Other financial liabilities | | | | | | |
| not measured at fair value | (2,673) | - | - | - | (2,673) | (4,234) |
| Fair value – hedging instruments | (1,097) | (135) | - | - | (1,231) | (851) |

## 43 DECLARATION PURSUANT TO § 161 AKTG REGARDING CONFORMITY WITH THE GERMAN CORPORATE GOVERNANCE CODE

The declaration pursuant to § 161 of the German Stock Corporation Act (AktG) regarding QSC's conformity with the German Corporate Governance Code in the version dated 7 February 2017 has been submitted by the Management and Supervisory Boards and is permanently and publicly available on the Company's website. Future amendments to the rules relevant for conformity with the German Corporate Governance Code will be posted on QSC's website without delay.

## 44 AUDITOR'S FEES

The fee paid to KPMG AG Wirtschaftsprüfungsgesellschaft for the audit of financial statements referred above all to the audit of the consolidated financial statements, the annual financial statements and the dependent company report of QSC AG, as well as to audits of the financial statements of various subsidiaries, including the key audit focuses agreed with the Supervisory Board. Other certification services relate to the auditing of the internal control system at service companies pursuant to ISAE 3402, the performance of agreed investigations to confirm compliance with contract terms and the audit review performed on special purpose combined financial information.
Other services relate to advisory services in connection with regulatory issues.

| € 000s | 2018 |
|---|---|
| **Auditor's fees** | |
| Audit of financial statements | 309 |
| Other certification services | 235 |
| Tax advisory services | - |
| Other services | 15 |
| **Auditor's fees** | **559** |

## 45 COMPENSATION OF THE MANAGEMENT AND SUPERVISORY BOARDS

Total Management Board compensation for the 2018 financial year came to € 1,132k, as against € 2,412k in the previous year. This comprises fixed compensation of € 600k (2017: € 1,100k), ancillary benefits of € 68k (2017: € 140k) and variable compensation of € 464k (2017: € 1,172k). The breakdown of total compensation by individual Management Board member can be found in the compensation tables included in the Compensation Report within the Group Management Report. This report also includes extensive information about the compensation system and about payments committed to active Management Board members in the event of the premature termination of their activities.
Compensation of former Management Board members totalled € 4k in the 2018 financial year (2017: € 942k).

The following table presents individualised information about the number of shares and convertible bonds held by members of the Management Board:

| | Shares | | Convertible bonds | |
|---|---|---|---|---|
| | **31 Dec. 2018** | **31 Dec. 2017** | **31 Dec. 2018** | **31 Dec. 2017** |
| Jürgen Hermann | 600,000 | 400,000 | 350,000 | 350,000 |
| Stefan A. Baustert | 40,000 | 40,000 | 200,000 | 200,000 |
| Udo Faulhaber (until 31 December 2017) | - | -[1] | - | 150,000[1] |
| Felix Höger (until 31 December 2017) | - | -[1] | - | 150,000[1] |

[1] Holdings at the time of retirement from the Management Board.

Jürgen Hermann purchased shares in the Company via the stock exchange in the 2018 calendar year (please also see the corresponding directors' dealings notifications made pursuant to Article 19 of the European Market Abuse Directive on QSC's website).
As in the previous year, the Supervisory Board received compensation totalling € 315k for its activity in the 2018 financial year. The breakdown of overall compensation by individual Supervisory Board member and further details can be found in the Compensation Report within the Group Management Report. This report also includes information about the compensation system and an overview of the shares and convertible bonds held by Supervisory Board members.
The actuarial present value of provisions for vested claims to pensions for former Management Board members amounts to € 1,919k prior to the offsetting of an asset value of € 1,695k for a reinsurance policy.

## 46 RISKS

Risks are presented in detail in the Risk Report within the Group Management Report.

## 47 PROPOSED APPROPRIATION OF PROFIT

The Management and Supervisory Boards have decided to propose to the Annual General Meeting that a dividend of € 0.03 per share be paid to shareholders.

## 48 DIRECTORS AND OFFICERS

**Management Board.** The members of the Management Board in the 2018 financial year were as follows:

| Management Board member | |
|---|---|
| Jürgen Hermann | Chief Executive Officer |
| Stefan A. Baustert | Chief Financial Officer |

**Supervisory Board.** The members of the Supervisory Board in the 2018 financial year were as follows:

| Supervisory Board member | |
|---|---|
| Dr. Bernd Schlobohm | Businessman, Chairman |
| Dr. Frank Zurlino | Managing Partner at Horn & Company, Deputy Chairman |
| Ina Schlie | SVP Digital Government – Government Relations MEE, SAP SE, Walldorf |
| Gerd Eickers | Businessman |
| Anne-Dore Ahlers (until 12 July 2018) | Chairman of Works Council, Employee Representative |
| Matthias Galler (from 12 July 2018) | Senior IT Consultant, Chairman of IT Works Council at QSC AG, Employee Representative |
| Cora Hödl | Head of Technology/Infrastructure & Voice at Plusnet GmbH, Employee Representative |

Dr. Frank Zurlino is also a member of the Advisory Board at M2Beauté Cosmetics GmbH, Cologne, Germany.
Ina Schlie is also a member of the Advisory Board at Adolf Würth GmbH & Co. KG, Künzelsau, Germany.
Gerd Eickers is also Chairman of the Supervisory Board at Contentteam AG, Cologne, Germany.

The term in office of the Supervisory Board ends upon the conclusion of the Annual General Meeting approving the actions of the Company's directors and officers for the 2022 financial year.

Cologne, 20 March 2019

QSC AG
The Management Board

| | |
|---|---|
| Jürgen Hermann | Stefan A. Baustert |
| Chief Executive Officer | Chief Financial Officer |

# STATEMENT OF RESPONSIBILITY

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.

Cologne, 20 March 2019

QSC AG
The Management Board

Jürgen Hermann
Chief Executive Officer

Stefan A. Baustert
Chief Financial Officer

# INDEPENDENT AUDITOR'S REPORT

To QSC AG, Cologne

## Report on the Audit of the Consolidated Financial Statements and of the Group Management Report

### Opinions

We have audited the consolidated financial statements of QSC AG, Cologne, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2018, and the consolidated statement of income, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from 1 January to 31 December 2018, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of QSC AG, Cologne, for the financial year from 1 January to 31 December 2018. In accordance with the German legal requirements we have not audited the content of the Group's non-financial statement and the corporate governance statement as well as the unaudited marked disclosures of the corporate governance statement, which are included in the sections ‚Non-financial statement' and ‚Corporate governance statement' of the group management report.

In our opinion, on the basis of the knowledge obtained in the audit,

– the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2018, and of its financial performance for the financial year from 1 January to 31 December 2018, and
– the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the group management report does not cover the content of the Group's non-financial statement and the corporate governance statement as well as the unaudited marked disclosures in the corporate governance statement mentioned above.

Pursuant to Section 322 (3) sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

## Basis for the Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Section 317 HGB and the EU Audit Regulation No. 537/2014 (referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

## Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2018. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

### Impairment testing of recognised goodwill

For the accounting policies applied, we refer to the disclosures made by the Company in the notes to the consolidated financial statements in note no. 4. The assumptions underlying the measurement are presented in the notes to the consolidated financial statements under note no. 16.

## THE FINANCIAL STATEMENT RISK

Goodwill of EUR 55.6 million is recognised in the consolidated balance sheet of QSC AG. This corresponds to 19.6% of total assets.
Impairment of goodwill is tested annually at the level of the Telecommunications, Consulting and Cloud business segments. For this purpose, the carrying amount of the assets is compared with their recoverable amount for the respective business segment. If the carrying amount exceeds the recoverable amount, an impairment loss is recognised. For the impairment test, the Company determines the value in use. The reporting date for the impairment test is 31 December 2018.
Impairment testing of goodwill is complex and based on a range of assumptions that require judgement. These include the expected business and earnings development of the business segments for the next three years, the assumed long-term growth rates and the discount rate used. Based on the impairment tests conducted, the Company did not identify any need to recognise impairment losses.
There is the risk for the financial statements that an impairment loss existing as at the reporting date will not be recognised. There is also the risk that the related disclosures in the notes are not complete and appropriate.

## OUR AUDIT APPROACH

By involving our valuation experts, we have also assessed the appropriateness of the key assumptions and calculation methods of the Company. For this purpose we discussed the expected business and earnings development and the assumed long-term growth rates with those responsible for operational planning. As the impairment test at QSC was carried out by an external independent expert, we also confirmed the competence, professional skills and impartiality of the external independent expert that had been engaged and obtained an understanding of the nature of their work.
We also reconciled this with the budget prepared by the management board and approved by the supervisory board.
Furthermore, we confirmed the accuracy of the Company's previous forecasts by comparing the budgets of previous financial years with actual results and by analysing deviations. Since even small changes to the discount rate can have a significant impact on the results of impairment testing, we compared the assumptions and parameters used by the independent expert underlying the segment-specific discount rate discount rate, in particular the risk-free rate, the market risk premium and the beta coefficient, with our own assumptions and publicly available data.

Basing our assessment on the valuation model used by the client, we performed a control calculation to investigate the methodical approach and mathematical accuracy. In addition, we also critically evaluated the assessment of the valuation model made by the independent expert and reconciled their findings with our own findings.
In order to take account of forecast uncertainty, we examined the impact of potential changes in material assumptions related to measurement on value in use (sensitivity analysis) by calculating alternative scenarios and comparing these with the values stated by the Company.
The findings of the calculation were subsequently evaluated by comparing the computationally derived value of equity, which results from the total of value in use less net financial liabilities, with the market capitalisation of the shares of QSC AG (as at 31 December 2018).
In the course of our audit we also investigated whether all relevant assets and liabilities were fully taken into account and objectively allocated to the individual operating segments in an appropriate manner.
Finally, we assessed whether the disclosures in the notes regarding impairment of goodwill were appropriate. This also included an assessment of the appropriateness of disclosures in the notes according to IAS 36.134(f) on sensitivity in the event of a reasonably possible change in the key assumptions used for measurement.

### OUR OBSERVATIONS

The calculation method used for impairment testing of goodwill is appropriate and in line with the accounting policies to be applied.
The Company's assumptions and parameters used for measurement are within an acceptable range and are balanced as a whole.
The related disclosures in the notes are complete and appropriate.

## Other Information

Management is responsible for the other information. The other information comprises:

- the Group's non-financial statement and the corporate governance statement,
- the unaudited disclosures marked in the corporate governance statement and
- the remaining parts of the annual report, with the exception of the audited consolidated financial statements and group management report and our auditor's report.

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

## Responsibilities of Management and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

Management is responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, management is responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, management is responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, management is responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

## Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.
Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.
We exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by management and the reasonableness of estimates made by management and related disclosures.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw at-

tention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

– Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB.
– Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.
– Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
– Perform audit procedures on the prospective information presented by management in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by management as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

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

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

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

## Other Legal and Regulatory Requirements

### Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 12 July 2018. We were engaged by the chairperson of the accounting and audit committee of the supervisory board on 15 January 2019. We have been the group auditor of QSC AG, Cologne, without interruption since the financial year 2008.
We declare that the opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

## German Public Auditor Responsible for the Engagement

The German Public Auditor responsible for the engagement is Charlotte Salzmann.

Cologne, 20 March 2019

KPMG AG
Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Salzmann
Wirtschaftsprüferin
[German Public Auditor]

Gall
Wirtschaftsprüfer
[German Public Auditor]

## CALENDAR

**Quarterly Statement Q1 2019**
13 May 2019

**Annual General Meeting**
29 May 2019

**Quarterly Report Q2 2019**
5 August 2019

**Quarterly Statement Q3 2019**
11 November 2019

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