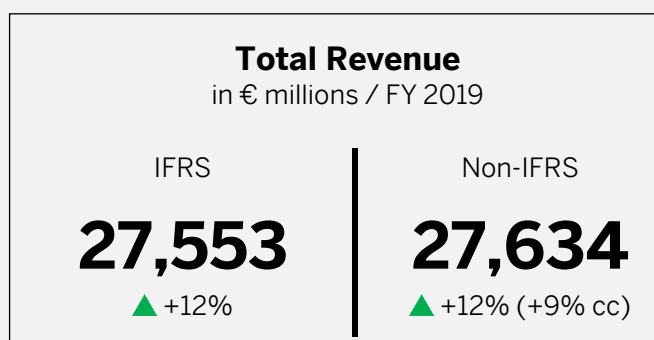
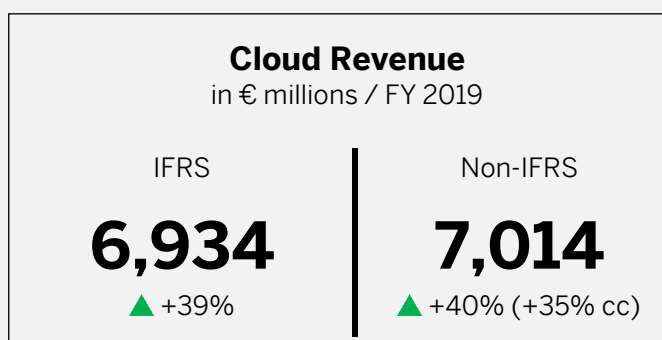
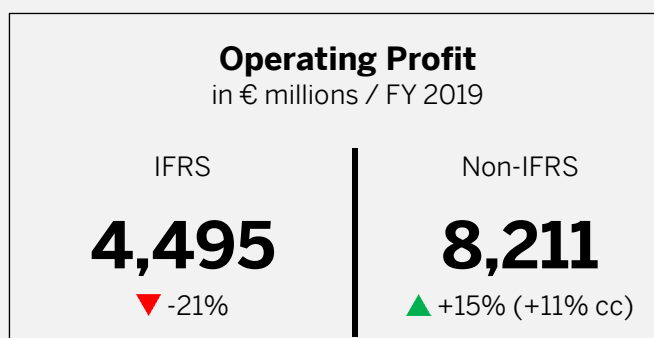
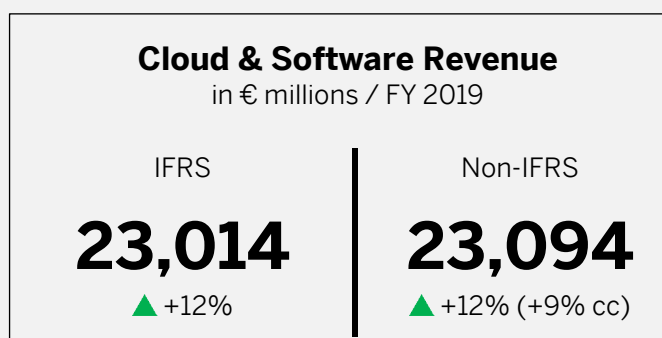


SAP Cloud Growth, Margin Focus and S/4HANA Adoption Power 2019 Results

- New Cloud Bookings Up 25%; Up 31% Excluding Infrastructure as-a-Service in FY 2019
- IFRS Cloud Revenue Up 39%; Non-IFRS Cloud Revenue Up 40% in FY 2019
- Cloud and Software as Well as Total Revenue Up 12% in FY 2019
- Cloud Gross Margin Up 5pp in FY 2019
- IFRS Operating Profit Down 21%; Non-IFRS Operating Profit Up 15% in FY 2019
- IFRS Operating Margin Down 6.8pp; Non-IFRS Operating Margin Up 0.8pp in FY 2019
- IFRS Earnings per Share Down 18%; Non-IFRS Earnings per Share Up 18% in FY 2019
- 2020 Total Revenue and Operating Profit Outlook Increased from Previous 2020 Ambition
- Greenhouse Gas Emissions Reduced for the Fifth Year in a Row; On Track for Being Carbon Neutral by 2025
- Women Representation in Workforce 34%; Women in Management 26%, Remains Committed to Goal of 30% by 2022



The share of more predictable revenue reached **67%** in the full year 2019 (+2 percentage points)



”SAP’s strategy to be the experience company powered by the intelligent enterprise is resonating. More and more customers are turning to SAP and Qualtrics to close their experience gap. At the same time, we continue to see strong adoption of S/4HANA as the core of the intelligent enterprise across all deployment models.”

Jennifer Morgan and Christian Klein, Co-CEOs

”For the fifth year in a row, we delivered on our full year outlook. I am particularly proud of our strong increase in non-IFRS profits and margins while continuing our remarkable top line momentum. This success would not have been possible without the dedication, innovative spirit and discipline of our people.”

Luka Mucic, CFO

Business Performance

Financial Highlights¹

Full Year 2019

SAP hit all of its 2019 revenue and profit targets.

For the full year new cloud bookings were €2.27 billion, up 25% (up 21% at constant currencies) and up 31% excluding Infrastructure-as-a-Service (IaaS). Cloud subscriptions and support backlog increased 23%, exceeding €12 billion at year-end. Cloud revenue was €6.93 billion (IFRS) or €6.77 billion (non-IFRS at constant currencies), achieving the full year outlook (€6.7 to €7.0 billion non-IFRS at constant currencies). Software licenses revenue decreased 2% (down 5% at constant currencies) year over year to €4.53 billion. New cloud and software license order entry exceeded €11.5 billion and grew by 10% year over year (7% at constant currencies). Cloud and software revenue was €23.01 billion (IFRS) or €22.49 billion (non-IFRS at constant currencies), achieving the full year outlook (€22.4 to €22.7 billion non-IFRS at constant currencies). Total revenue was up 12% year over year to €27.55 billion (IFRS), up 12% (non-IFRS) and up 9% at (non-IFRS at constant currencies).

The share of more predictable revenue grew by 2 percentage points year-over-year to 67% for the full year 2019.

Cloud gross margin increased 4.9 percentage points year over year to 63.5% (IFRS) and increased by 5.2 percentage points year over year to 68.2% (non-IFRS).

As expected, IFRS operating profit, operating margin and earnings per share were impacted by higher acquisition-related charges due to the Qualtrics acquisition and the charges from SAP's global restructuring program announced in early 2019. In addition, IFRS operating profit, operating margin and earnings per share were impacted by higher share-based compensation (due to the Qualtrics acquisition and the strong SAP share price increase over the year). For the full year, IFRS operating profit was down 21% to €4.50 billion and operating margin decreased 6.8 percentage points year over year to 16.3% (IFRS). Non-IFRS operating profit at constant currencies was €7.96 billion, achieving the full year outlook (€7.85 to €8.05 billion non-IFRS at constant currencies). Non-IFRS operating margin expanded by 0.8 percentage points year over year (non-IFRS) and 0.6 percentage points (non-IFRS at constant currencies).

Earnings per share decreased 18% to €2.80 (IFRS) and increased 18% to €5.11 (non-IFRS).

Operating cash flow for the full year was €3.50 billion, a decrease of 19% year over year. The decrease in operating cash flow was primarily due to higher payouts related to share-based compensation (€286 million), restructuring payouts (€784 million) and higher tax cash outflows (€651 million) compared to the full year 2018. In addition, operating cash flow experienced a year over year benefit of roughly €404 million from the application of IFRS 16. Free cash flow decreased 20% year over year to €2.28 billion. At year end, net debt was –€8.29 billion.

Fourth Quarter 2019

In the fourth quarter, new cloud bookings were €878 million, up 19% (up 17% at constant currencies) and up 20% excluding Infrastructure-as-a-Service (IaaS). Validating SAP's hybrid cloud strategy, one of SAP's largest on premise customers decided to move most of its SAP on premise landscape to the cloud and augmented the use of SAP SaaS solutions. This contract contributed 10 percentage points to the total new cloud bookings growth of 19%. SAP expects more of its larger customers to follow this path. Cloud revenue grew 35% year over year to €1.90 billion (IFRS), up 35% (non-IFRS) and up 32% (non-IFRS at constant currencies). Software licenses revenue was down 4% year over year to €2.00 billion (IFRS), down 4% (non-IFRS) and down 6% (non-IFRS at constant currencies). New cloud and software order entry exceeded €5 billion and grew by 6% year over year (5% at constant currencies) in the fourth quarter. Cloud and software revenue grew 8% year over year to €6.85 billion (IFRS), up 8% (non-IFRS) and 6% (non-IFRS at constant currencies). Total revenue was up 8% year over year to €8.04 billion (IFRS), up 8% (non-IFRS) and up 6% (non-IFRS at constant currencies).

Cloud gross margin increased 6.9 percentage points year over year to 65.2% (IFRS) and increased by 7.4 percentage points year over year to 69.5% (non-IFRS).

Operating profit decreased 11% year over year to €2.12 billion (IFRS), up 12% (non-IFRS) and up 9% (non-IFRS at constant currencies). Operating margin decreased 5.9 percentage points year over year to 26.4% (IFRS) and expanded by 1.1 percentage points (non-IFRS) and 1.0 percentage points (non-IFRS at constant currencies).

Earnings per share was down 3% to €1.37 (IFRS) and up 21% to €1.82 (non-IFRS).

¹ The full year and Q4 2019 results were also impacted by changes in accounting policies, business combinations and other effects. For details, please refer to the disclosures on page 32 of this Quarterly Statement.

Segment Performance Fourth Quarter 2019

SAP's three reportable segments "Applications, Technology & Services", "Intelligent Spend Group" and "Qualtrics²" showed the following performance:

Applications, Technology & Services (AT&S)

In the fourth quarter, segment revenue in AT&S was up 5% to €6.97 billion year-over-year (up 3% at constant currencies). Solutions which contributed to this growth are listed below.

SAP S/4HANA

SAP S/4HANA, the core of the Intelligent Enterprise, embeds analytics, simulation, prediction, and decision support to run LIVE business. SAP offers customers a choice of deployment options including cloud, on-premise and hybrid so they can choose the scenario or combination that is right for them. SAP S/4HANA is the market-leading intelligent ERP that provides unparalleled business agility, empowering companies across all industries to reinvent their business models for the digital economy and navigate dynamic marketplaces.

Approximately 1,200 SAP S/4HANA customers were added in the quarter, taking total adoption to more than 13,800 customers, up 24% year over year. In the fourth quarter, approximately 40% of the additional SAP S/4HANA customers were net new.³

In Q4, world class organizations such as Ford Motor Group, Zalando, die Autobahn GmbH, Decathlon, E.ON, Lockheed Martin, MINTH Group, and Roche selected SAP S/4HANA. Vodafone recently went live on a single global instance of SAP S/4HANA. Additional go lives include BDO, Deutsche Telekom, Sandvik Mining and Construction, ARAMEX, Aareal Bank and PayPal Giving Fund. A fast-growing number of companies of all sizes including Kubota Corporation, Gate Gourmet Switzerland, Centaur Holding and Tom Tailor are deploying SAP S/4HANA in part or entirely in the cloud. Mercedes Benz Formula E is now live on SAP S/4HANA Cloud.

Human Experience Management (HXM)

The SAP SuccessFactors Human Experience Management (HXM) Suite provides powerful solutions for core HR and payroll, talent management, employee experience management and people analytics to empower employees while enabling HR leaders to accelerate business growth. As the next evolution of human capital management (HCM), HXM is a new way of delivering software that is designed completely around what employees need, how they work, and what motivates them. The SAP SuccessFactors HXM Suite is unique in that it builds on the best of HCM and extends it to create truly dynamic, engaging and employee-centered experiences.

SAP SuccessFactors Human Experience Management solutions from SAP leverage Qualtrics to help customers gain real-time insight into which behaviors are trending across the organization and the sentiment behind them. More than 450 customers have selected these solutions since their launch in May 2019.

Landesbank Baden-Württemberg, Genting Hong Kong, and Universal Beijing Resort were some of many competitive wins and Eurobank, Computacenter and Chalhoub Group went live on SAP SuccessFactors this quarter.

SAP C/4HANA

SAP C/4HANA combines leading solutions for marketing, sales, commerce, service and customer data, enabling companies to manage and deliver personalized customer experiences across touchpoints and channels based on a complete view of the customer. As part of the Intelligent Enterprise, SAP C/4HANA integrates with SAP S/4HANA from demand signals to fulfillment in one end-to-end process.

SAP C/4HANA solutions also use the benefits of Qualtrics Customer Experience Management to understand the wants and needs of customers. This enables organizations to combine customer feedback and operational data to listen, understand and take action in the moment to improve the customer experience.

The Nielsen Company, Royal Dutch Shell, Chevron, Carhartt, Intersport Deutschland, and Aldo Group all chose SAP C/4HANA solutions in Q4.

Business Technology Platform

SAP's business technology platform helps customers to turn their data into business value. It encompasses database and data management, application development and integration, analytics, and intelligent technologies. The business technology platform represents a combination of SAP's leading technologies such as SAP HANA, SAP Cloud Platform, SAP Data Warehouse Cloud, SAP Analytics Cloud, SAP Data Intelligence and SAP Intelligent Robotic Process Automation bundled into one single reference architecture. It supports cloud, on-premise and hybrid customer landscapes. Additionally, the business technology platform offers seamless interoperability with hyperscalers' technologies to deliver a high level of scalability and flexibility. The business technology platform provides customers with convenient access to SAP data, SAP technology and SAP pre-configured business services to help them drive business value across their entire solution landscape.

Barclaycard, Telecom Italia, GetYourGuide and Allegiant Travel Company selected SAP's business technology platform and analytics cloud solutions in the fourth quarter.

² As of Q4 2019, the Company renamed the former Customer and Experience Management segment to Qualtrics segment since our customer experience offerings are no longer included in this segment. For details, please refer to the disclosures on page 21 of this Quarterly Statement.

³ Please refer to page 33 for information on changes in the definition of S/4HANA and its impact on the respective customer count.

Intelligent Spend Group (ISG)

In the fourth quarter, segment revenue in the Intelligent Spend Group was up 15% to €830 million year-over-year (up 12% at constant currencies).

With the Intelligent Spend Group, SAP provides collaborative commerce capabilities (SAP Ariba), effortless travel and expense processing (SAP Concur) and flexible workforce management (SAP Fieldglass). SAP Intelligent Spend is also leveraging Qualtrics. Every Ariba screen will have Qualtrics embedded to enhance experience and to create a continuous feedback loop for buyers and suppliers on the network. The Intelligent Spend Group portfolio represents the largest commerce platform in the world with over \$3.6 trillion in global commerce annually transacted in more than 180 countries.

Kärcher, Electrolux, Coca-Cola Hellenic Bottling Company, GEA Group, Repsol, and New York Yankees chose SAP's Intelligent Spend Group solutions in the fourth quarter.

Qualtrics

In the fourth quarter, Qualtrics segment revenue was €156 million.

With Qualtrics, SAP combines market leadership in Experience Management (XM) with end-to-end operational power in over 25 industries to help organizations manage and improve the four core experiences of business: customer, employee, product, and brand. Chalhoub Group is one example of numerous companies using the SuccessFactors Qualtrics platform.

The Qualtrics XM™ Platform is trusted by over 11,450 customers to listen, understand, and take action on experience data (X-data™) by combining X-data with the operational data (O-data™) systems of the enterprise.

In Q4, Volkswagen Group Australia, JPMorgan Chase, Allianz SE, Alaska Airlines, ExxonMobil, Santander, Samsung Group and the Hearst Corporation and many others selected Qualtrics to move beyond systems of record to new systems of action and achieve breakthrough results.

Segment Results at a Glance⁴

Segment Performance Fourth Quarter 2019									
€ million, unless otherwise stated (Non-IFRS)	Applications, Technology & Services			Intelligent Spend Group			Qualtrics		
	Actual Currency	Δ in %	Δ in % const. curr.	Actual Currency	Δ in %	Δ in % const. curr.	Actual Currency	Δ in %	Δ in % const. curr.
Cloud revenue	1,094	35	32	701	17	14	110	NA	NA
Segment revenue	6,967	5	3	830	15	12	156	NA	NA
Segment profit (loss)	3,288	8	6	172	17	13	-10	NA	NA
Cloud gross margin (in %)	60.8	10.8pp	10.7pp	78.0	0.0pp	-0.1pp	90.1	NA	NA
Segment margin (in %)	47.2	1.1pp	1.0pp	20.7	0.4pp	0.2pp	-6.5	NA	NA

Regional Revenue Performance Full Year 2019

SAP had a solid performance in the EMEA region with cloud and software revenue increasing 9%. Cloud revenue increased 47% with Germany, the Netherlands and the UK being highlights. In addition, Spain and Switzerland had strong years in software licenses revenue.

The Company had a strong performance in the Americas region. Cloud and software revenue increased 15% (IFRS) and 16% (non-IFRS). Cloud revenue increased 34% (IFRS) and 35% (non-IFRS) with Canada and Brazil being highlights. For software licenses revenue, the U.S. had a solid year, while Brazil and Canada had a strong year.

In the APJ region, SAP had a solid year amidst a challenging market environment. Cloud and software revenue was up 10%, while cloud revenue increased 43%. For cloud revenue and software licenses revenue, both China and Japan were highlights in 2019.

⁴ For details on the performance of our segments please refer to pages 21-28

Financial Results at a Glance

Fourth Quarter 2019

€ million, unless otherwise stated	IFRS			Non-IFRS ¹⁾			
	Q4 2019	Q4 2018	Δ in %	Q4 2019	Q4 2018	Δ in %	Δ in % const. curr.
New Cloud Bookings ²⁾	NA	NA	NA	878	736	19	17
Cloud revenue	1,897	1,406	35	1,908	1,413	35	32
Software licenses and support revenue	4,950	4,914	1	4,950	4,914	1	-1
Cloud and software revenue	6,847	6,320	8	6,858	6,327	8	6
Total revenue	8,040	7,428	8	8,051	7,434	8	6
Share of more predictable revenue (in %)	60	57	3pp	60	57	3pp	
Operating profit (loss)	2,125	2,399	-11	2,843	2,545	12	9
Profit (loss) after tax	1,654	1,691	-2	2,192	1,802	22	
Basic earnings per share (in €)	1.37	1.41	-3	1.82	1.51	21	
Number of employees (FTE, December 31)	100,330	96,498	4	NA	NA	NA	NA

Full Year 2019

€ million, unless otherwise stated	IFRS			Non-IFRS ¹⁾			
	Q1-Q4 2019	Q1-Q4 2018	Δ in %	Q1-Q4 2019	Q1-Q4 2018	Δ in %	Δ in % const. curr.
New Cloud Bookings ²⁾	NA	NA	NA	2,268	1,814	25	21
Cloud revenue	6,934	4,993	39	7,014	5,027	40	35
Software licenses and support revenue	16,080	15,628	3	16,080	15,629	3	1
Cloud and software revenue	23,014	20,622	12	23,094	20,655	12	9
Total revenue	27,553	24,708	12	27,634	24,741	12	9
Share of more predictable revenue (in %)	67	65	2pp	67	65	2pp	
Operating profit (loss)	4,495	5,703	-21	8,211	7,163	15	11
Profit (loss) after tax	3,387	4,088	-17	6,154	5,199	18	
Basic earnings per share (in €)	2.80	3.42	-18	5.11	4.35	18	
Number of employees (FTE, December 31)	100,330	96,498	4	NA	NA	NA	NA

¹⁾ For a breakdown of the individual adjustments see table "Non-IFRS Adjustments by Functional Areas" in this Quarterly Statement.

²⁾ As this is an order entry metric, there is no IFRS equivalent.

Due to rounding, numbers may not add up precisely.

Business Outlook 2020

Reflecting SAP's strong business momentum, the Company provides the following 2020 outlook replacing the previous 2020 financial ambition:

- Non-IFRS cloud revenue is expected to be in a range of €8.7 – €9.0 billion at constant currencies (2019: €7.01 billion), up 24% – 28% at constant currencies
- Non-IFRS cloud and software revenue is expected to be in a range of €24.7 – €25.1 billion at constant currencies (2019: €23.09 billion), up 7% – 9% at constant currencies
- Non-IFRS total revenue is expected to be in a range of €29.2 – €29.7 billion at constant currencies (2019: €27.63 billion), up 6% – 8% at constant currencies
- Non-IFRS operating profit is expected to be in a range of €8.9 – €9.3 billion at constant currencies (2019: €8.21 billion), up 8% – 13% at constant currencies
- The share of more predictable revenue (defined as the total of cloud revenue and software support revenue) is expected to reach approximately 70%

While SAP's full-year 2020 business outlook is at constant currencies, actual currency reported figures are expected to be impacted by currency exchange rate fluctuations as the Company progresses through the year.

Expected Currency Impact 2020 Based on December 2019 Level for the Rest of the Year		
In percentage points	Q1	FY
Cloud revenue	0pp - +2pp	-1pp - +1pp
Cloud and software revenue	0pp - +2pp	-1pp - +1pp
Operating profit	1pp - +3pp	0pp - +2pp

Ambition 2023

Over the period from 2018 through 2023, SAP continues to expect the following:

- More than triple non-IFRS cloud revenue (2018: €5.03 billion)
- Grow to more than €35 billion in non-IFRS total revenue (2018: €24.74 billion)
- Approach a share of more predictable revenue of 80%
- Reach a non-IFRS cloud gross margin of 75%
- Increase the non-IFRS operating margin by one percentage point per year on average, representing a total expansion of approximately 500 basis points

Additional Information

This Quarterly Statement and all information therein is preliminary and unaudited.

The 2019 numbers include Qualtrics' revenues and profits only from the acquisition date of January 23rd. The comparative numbers for full year 2018 do not include Qualtrics revenues and profits and include Callidus revenue and profits only from the April 5th, 2018 acquisition date.

The 2019 Integrated Report and Annual Report on Form 20-F will be published on February 27th, 2020 and will be available for download at www.sapintegratedreport.com.

For a more detailed description of all of SAP's non-IFRS measures and their limitations as well as our constant currency and free cash flow figures see [Explanation of Non-IFRS Measures](#) online.

Definition of key growth metrics

New cloud bookings are the total of all orders received in a given period the revenue from which is expected to be classified as cloud revenue and that result from purchases by new customers and from incremental purchases by existing customers. Consequently, orders to renew existing contracts are not included in this metric. The order amount must be committed. Consequently, due to their pay-per-use nature, business network transaction fees which do not include a committed minimum consumption are not reflected in the bookings metric (e.g. SAP Ariba and SAP Fieldglass transaction-based fees). Amounts included in the measures are generally annualized (annualized contract value ACV).

Share of more predictable revenue is the total of non-IFRS cloud revenue and non-IFRS software support revenue as a percentage of total revenue

New cloud and software license order entry is the total of new cloud order entry and software license order entry. The new cloud order entry metric is identical to the new cloud bookings metric defined above except that it considers the total contract value (TCV) of the orders where the new cloud bookings metric considers the orders' annualized contract value (ACV). Software license order entry is the total of all orders received in a given period the revenue from which is expected to be classified as software license revenue. The support services commonly sold with the software license are not included in the software license order entry metric.

Global commerce is the total commerce volume transacted on the SAP Ariba, SAP Concur and SAP Fieldglass Networks in the trailing 12 months. SAP Ariba commerce includes procurement and sourcing spend.

For explanations on other key growth metrics please refer the performance management section of SAP's Integrated Report 2018, which can be found at www.sapintegratedreport.com.

Webcast

SAP senior management will host a press conference in Walldorf on Tuesday, January 28th at 10:00 AM (CET) / 9:00 AM (GMT) / 4:00 AM (Eastern) / 1:00 AM (Pacific), followed by a financial analyst conference call at 2:00 PM (CET) / 1:00 PM (GMT) / 8:00 AM (Eastern) / 5:00 AM (Pacific). Both conferences will be webcast live on the Company's website at www.sap.com/investor and will be available for replay. Supplementary financial information pertaining to the full-year and quarterly results can be found at www.sap.com/investor.

About SAP

As the Experience Company powered by the Intelligent Enterprise, SAP is the market leader in enterprise application software, helping companies of all sizes and in all industries run at their best: 77% of the world's transaction revenue touches an SAP system. Our machine learning, Internet of Things (IoT), and advanced analytics technologies help turn customers' businesses into intelligent enterprises. SAP helps give people and organizations deep business insight and fosters collaboration that helps them stay ahead of their competition. We simplify technology for companies so they can consume our software the way they want — without disruption. Our end-to-end suite of applications and services enables more than 440,000 business and public customers to operate profitably, adapt continuously, and make a difference. With a global network of customers, partners, employees, and thought leaders, SAP helps the world run better and improve people's lives. For more information, visit www.sap.com.

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Contents

Financial and Non-Financial Key Facts (IFRS and Non-IFRS)	10
Primary Financial Statements of SAP Group (IFRS)	12
(A) Consolidated Income Statements	12
(A.1) Consolidated Income Statements – Quarter	12
(A.2) Consolidated Income Statements – Year-to-Date	13
(B) Consolidated Statements of Financial Position	14
(C) Consolidated Statements of Cash Flows	15
Non-IFRS Numbers	16
(D) Basis of Non-IFRS Presentation	16
(E) Reconciliation from Non-IFRS Numbers to IFRS Numbers	17
(E.1) Reconciliation from Non-IFRS Numbers to IFRS Numbers – Quarter	17
(E.2) Reconciliation from Non-IFRS Numbers to IFRS Numbers – Year-to-Date	18
(F) Non-IFRS Adjustments – Actuals and Estimates	19
(G) Non-IFRS Adjustments by Functional Areas	19
Disaggregations	21
(H) Segment Reporting	21
(H.1) Segment Policies and Segment Changes	21
(H.2) Segment Reporting – Quarter	21
(H.3) Segment Reporting – Year-to-Date	25
(I) Revenue by Region (IFRS and Non-IFRS)	29
(I.1) Revenue by Region (IFRS and Non-IFRS) – Quarter	29
(I.2) Revenue by Region (IFRS and Non-IFRS) – Year-to-Date	30
(J) Employees by Region and Functional Areas	31
Other Disclosures	32
(K) Accounting Policy Changes	32
(K.1) Adoption of IFRS 16	32
(L) Impact of Hyperinflation	32
(M) Business Combinations and Divestments	32
(M.1) Business Combinations	32
(M.2) Divestments	33
(N) Miscellaneous Disclosures	33
(N.1) Changes in Estimates	33
(N.2) Financial Income, Net	33
(N.3) Financial Instruments	33
(N.4) S/4HANA Customers	33

Financial and Non-Financial Key Facts (IFRS and Non-IFRS)

€ millions, unless otherwise stated	Q1 2018	Q2 2018	Q3 2018	Q4 2018	TY 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	TY 2019
Revenues										
Cloud (IFRS)	1,070	1,213	1,304	1,406	4,993	1,555	1,692	1,789	1,897	6,934
Cloud (non-IFRS)	1,072	1,227	1,315	1,413	5,027	1,581	1,717	1,807	1,908	7,014
% change – yoy	18	32	40	42	33	48	40	37	35	40
% change constant currency – yoy	31	40	41	40	38	41	35	33	32	35
Software licenses (IFRS)	625	996	937	2,089	4,647	650	948	932	2,001	4,532
Software licenses (non-IFRS)	625	996	937	2,089	4,647	650	948	932	2,001	4,532
% change – yoy	-10	-9	-9	1	-5	4	-5	-1	-4	-2
% change constant currency – yoy	-2	-5	-8	8	0	1	-6	-4	-6	-5
Software support (IFRS)	2,656	2,735	2,765	2,825	10,981	2,838	2,854	2,907	2,948	11,547
Software support (non-IFRS)	2,656	2,735	2,765	2,826	10,982	2,838	2,854	2,907	2,948	11,548
% change – yoy	-3	0	3	3	1	7	4	5	4	5
% change constant currency – yoy	5	7	6	3	5	4	2	3	2	3
Software licenses and support (IFRS)	3,281	3,731	3,702	4,914	15,628	3,489	3,802	3,839	4,950	16,080
Software licenses and support (non-IFRS)	3,281	3,731	3,702	4,914	15,629	3,489	3,802	3,840	4,950	16,080
% change – yoy	-4	-2	0	2	-1	6	2	4	1	3
% change constant currency – yoy	4	3	2	5	4	3	0	1	-1	1
Cloud and software (IFRS)	4,351	4,944	5,007	6,320	20,622	5,044	5,495	5,629	6,847	23,014
Cloud and software (non-IFRS)	4,353	4,958	5,017	6,327	20,655	5,070	5,520	5,647	6,858	23,094
% change – yoy	1	4	8	9	6	16	11	13	8	12
% change constant currency – yoy	9	10	10	11	10	12	8	10	6	9
Total revenue (IFRS)	5,261	5,999	6,020	7,428	24,708	6,091	6,631	6,791	8,040	27,553
Total revenue (non-IFRS)	5,262	6,014	6,031	7,434	24,741	6,118	6,656	6,809	8,051	27,634
% change – yoy	0	4	8	9	5	16	11	13	8	12
% change constant currency – yoy	9	10	10	13	11	12	8	10	6	9
Share of more predictable revenue (IFRS, in %)	71	66	68	57	65	72	69	69	60	67
Share of more predictable revenue (non-IFRS, in %)	71	66	68	57	65	72	69	69	60	67
Profits										
Operating profit (loss) (IFRS)	1,025	1,044	1,236	2,399	5,703	-136	827	1,679	2,125	4,495
Operating profit (loss) (non-IFRS)	1,235	1,640	1,742	2,545	7,163	1,467	1,816	2,086	2,843	8,211
% change	3	4	6	8	6	19	11	20	12	15
% change constant currency	14	12	11	8	10	13	8	15	9	11
Profit (loss) after tax (IFRS)	708	718	972	1,691	4,088	-108	582	1,259	1,654	3,387
Profit (loss) after tax (non-IFRS)	868	1,171	1,358	1,802	5,199	1,080	1,317	1,564	2,192	6,154
% change	-2	5	12	-16	-3	25	12	15	22	18
Margins										
Cloud gross margin (IFRS, in %)	59.3	58.3	58.6	58.2	58.6	61.2	62.6	64.5	65.2	63.5
Cloud gross margin (non-IFRS, in %)	63.2	63.6	63.5	62.1	63.1	66.2	67.9	69.0	69.5	68.2
Software license and support gross margin (IFRS, in %)	85.7	85.8	86.0	88.3	86.6	84.6	86.0	87.0	88.1	86.6
Software license and support gross margin (non-IFRS, in %)	86.4	87.0	87.1	88.7	87.4	85.7	87.1	87.6	88.8	87.5
Cloud and software gross margin (IFRS, in %)	79.2	79.0	78.9	81.6	79.8	77.4	78.8	79.9	81.7	79.6
Cloud and software gross margin (non-IFRS, in %)	80.7	81.2	80.9	82.8	81.5	79.6	81.1	81.7	83.5	81.6
Gross margin (IFRS, in %)	68.5	68.6	68.3	72.9	69.8	66.5	68.2	70.3	72.9	69.7
Gross margin (non-IFRS, in %)	70.2	71.5	71.0	74.0	71.8	69.5	71.4	72.3	75.3	72.3
Operating margin (IFRS, in %)	19.5	17.4	20.5	32.3	23.1	-2.2	12.5	24.7	26.4	16.3
Operating margin (non-IFRS, in %)	23.5	27.3	28.9	34.2	29.0	24.0	27.3	30.6	35.3	29.7
AT&S segment – Cloud gross margin (in %)	51.3	52.6	51.9	50.0	51.4	56.2	58.3	59.8	60.8	58.9
AT&S segment – Segment gross margin (in %)	71.4	72.8	72.5	75.4	73.2	70.2	72.5	73.6	76.8	73.6
AT&S segment – Segment margin (in %)	35.5	39.9	40.5	46.1	41.0	34.9	40.8	43.1	47.2	41.9
ISG segment – Cloud gross margin (in %)	77.4	77.4	78.4	78.0	77.8	78.0	78.2	78.0	78.0	78.1

€ millions, unless otherwise stated	Q1 2018	Q2 2018	Q3 2018	Q4 2018	TY 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	TY 2019
ISG segment – Segment gross margin (in %)	68.7	69.3	69.1	69.2	69.1	69.2	69.7	69.9	71.3	70.1
ISG segment – Segment margin (in %)	16.7	20.3	23.0	20.4	20.2	21.6	19.6	25.5	20.7	21.9
Qualtrics segment – Cloud gross margin (in %)	NA	NA	NA	NA	NA	91.4	92.0	91.4	90.1	91.1
Qualtrics segment – Segment gross margin (in %)	NA	NA	NA	NA	NA	81.4	79.9	78.6	74.9	78.3
Qualtrics segment – Segment margin (in %)	NA	NA	NA	NA	NA	7.9	5.6	3.2	-6.5	1.6
Key Profit Ratios										
Effective tax rate (IFRS, in %)	28.3	29.5	24.1	26.9	27.0	23.2	28.6	26.1	26.2	26.7
Effective tax rate (non-IFRS, in %)	27.6	27.5	24.0	26.7	26.3	26.1	27.0	25.8	25.9	26.2
Earnings per share, basic (IFRS, in €)	0.59	0.60	0.81	1.41	3.42	-0.10	0.48	1.04	1.37	2.80
Earnings per share, basic (non-IFRS, in €)	0.73	0.98	1.14	1.51	4.35	0.90	1.09	1.30	1.82	5.11
Order Entry										
New cloud and software order entry	1,346	2,332	2,221	4,533	10,432	1,579	2,404	2,656	4,820	11,459
% change – yoy	1	8	11	15	11	17	3	20	6	10
% change constant currency – yoy	10	12	12	18	14	13	1	15	5	7
New cloud bookings	245	421	411	736	1,814	324	494	572	878	2,268
% change – yoy	14	24	36	25	25	32	17	39	19	25
% change constant currency – yoy	25	29	37	23	28	26	15	34	17	21
Orders – number of cloud deals (in transactions)	2,376	3,023	3,360	5,054	13,813	2,961	3,624	3,717	5,377	15,679
Share of cloud orders greater than €5 million based on total cloud order entry volume (in %)	20	32	28	33	30	26	26	29	35	31
Share of cloud orders smaller than €1 million based on total cloud order entry volume (in %)	39	31	36	28	32	39	34	33	28	32
Orders – number of on-premise software deals (in transactions)	13,549	14,538	13,794	16,649	58,530	12,229	12,522	12,270	15,563	52,584
Share of orders greater than €5 million based on total software order entry volume (in %)	18	29	22	35	29	28	28	31	35	32
Share of orders smaller than €1 million based on total software order entry volume (in %)	50	41	42	33	39	42	36	39	31	35
Liquidity and Cash Flow										
Net cash flows from operating activities	2,578	407	499	819	4,303	2,802	-122	638	180	3,497
Capital expenditure	-427	-391	-328	-312	-1,458	-359	-180	-164	-114	-817
Payments of lease liabilities	NA	NA	NA	NA	NA	-78	-106	-104	-116	-404
Free cash flow	2,151	16	171	506	2,844	2,365	-409	370	-50	2,276
% of total revenue (IFRS)	41	0	3	7	12	39	-6	5	-1	8
% of profit after tax (IFRS)	304	2	18	30	70	-2,198	-70	29	-3	67
Group liquidity, gross	8,270	4,688	4,738	8,838	8,838	7,673	5,280	5,597	5,382	5,382
Group debt	-7,723	-7,660	-7,521	-11,331	-11,331	-13,866	-13,833	-13,874	-13,668	-13,668
Group liquidity, net	546	-2,972	-2,784	-2,493	-2,493	-6,193	-8,553	-8,277	-8,286	-8,286
Days sales outstanding (DSO, in days) ¹⁾	68	68	68	70	70	69	70	71	71	71
Financial Position										
Cash and cash equivalents	7,598	4,516	4,507	8,627	8,627	7,332	5,168	5,525	5,314	5,314
Goodwill	20,856	23,406	23,523	23,736	23,736	29,163	28,855	29,907	29,162	29,162
Total assets	45,463	45,491	45,631	51,502	51,502	60,862	57,876	59,965	60,229	60,229
Contract liabilities (current)	5,046	4,867	3,600	3,028	3,028	6,068	5,558	4,400	4,289	4,289
Equity ratio (total equity in % of total assets)	56	57	59	56	56	48	48	50	51	51
Non-Financials										
Number of employees (quarter end) ²⁾	91,120	93,846	94,989	96,498	96,498	98,659	98,332	99,710	100,330	100,330
Employee retention (in %, rolling 12 months)	94.4	94.3	94.1	93.9	93.9	93.8	93.5	93.3	93.3	93.3
Women in management (in %, quarter end)	25.6	25.8	25.9	25.7	25.7	26.0	26.2	26.3	26.4	26.4
Greenhouse gas emissions (in kilotons)	100	75	65	70	310	110	75	65	50	300

¹⁾ Days sales outstanding measures the average number of days from the raised invoice to cash receipt from the customer. We calculate DSO by dividing the average invoiced trade receivables balance of the last 12 months by the average monthly cash receipt of the last 12 months.

²⁾ In full-time equivalents.

Due to rounding, numbers may not add up precisely.

Primary Financial Statements of SAP Group (IFRS)

(A) Consolidated Income Statements

(A.1) Consolidated Income Statements – Quarter

€ millions, unless otherwise stated	Q4 2019	Q4 2018	Δ in %
Cloud	1,897	1,406	35
Software licenses	2,001	2,089	-4
Software support	2,948	2,825	4
Software licenses and support	4,950	4,914	1
Cloud and software	6,847	6,320	8
Services	1,193	1,108	8
Total revenue	8,040	7,428	8
Cost of cloud	-661	-587	13
Cost of software licenses and support	-590	-574	3
Cost of cloud and software	-1,251	-1,161	8
Cost of services	-932	-851	9
Total cost of revenue	-2,182	-2,013	8
Gross profit	5,858	5,415	8
Research and development	-1,190	-945	26
Sales and marketing	-2,082	-1,795	16
General and administration	-411	-266	54
Restructuring	-28	7	<-100
Other operating income/expense, net	-23	-17	34
Total operating expenses	-5,915	-5,029	18
Operating profit (loss)	2,125	2,399	-11
Other non-operating income/expense, net	-9	2	<-100
Finance income	246	102	>100
Finance costs	-121	-189	-36
Financial income, net	125	-87	<-100
Profit (loss) before tax	2,241	2,314	-3
Income tax expense	-587	-622	-6
Profit (loss) after tax	1,654	1,691	-2
Attributable to owners of parent	1,636	1,686	-3
Attributable to non-controlling interests	17	5	>100
Earnings per share, basic (in €)¹⁾	1.37	1.41	-3
Earnings per share, diluted (in €)¹⁾	1.37	1.41	-3

¹⁾ For the three months ended December 31, 2019 and 2018, the weighted average number of shares was 1,194 million (diluted 1,194 million) and 1,194 million (diluted: 1,194 million), respectively (treasury stock excluded).

²⁾ In 2019, we renamed "cloud subscription and support" revenue and "cost of cloud subscription and support" to "cloud" revenue and "cost of cloud" without changing the content of these line items.

Due to rounding, numbers may not add up precisely.

(A.2) Consolidated Income Statements – Year-to-Date

€ millions, unless otherwise stated	Q1–Q4 2019	Q1–Q4 2018	Δ in %
Cloud	6,934	4,993	39
Software licenses	4,532	4,647	-2
Software support	11,547	10,981	5
Software licenses and support	16,080	15,628	3
Cloud and software	23,014	20,622	12
Services	4,539	4,086	11
Total revenue	27,553	24,708	12
Cost of cloud	-2,533	-2,068	22
Cost of software licenses and support	-2,157	-2,092	3
Cost of cloud and software	-4,690	-4,160	13
Cost of services	-3,661	-3,302	11
Total cost of revenue	-8,351	-7,462	12
Gross profit	19,202	17,246	11
Research and development	-4,279	-3,624	18
Sales and marketing	-7,689	-6,781	13
General and administration	-1,629	-1,098	48
Restructuring	-1,128	-19	>100
Other operating income/expense, net	18	-20	<-100
Total operating expenses	-23,058	-19,005	21
Operating profit (loss)	4,495	5,703	-21
Other non-operating income/expense, net	-73	-56	29
Finance income	785	371	>100
Finance costs	-589	-418	41
Financial income, net	196	-47	<-100
Profit (loss) before tax	4,618	5,600	-18
Income tax expense	-1,231	-1,511	-19
Profit (loss) after tax	3,387	4,088	-17
Attributable to owners of parent	3,337	4,083	-18
Attributable to non-controlling interests	50	6	>100
Earnings per share, basic (in €)¹⁾	2.80	3.42	-18
Earnings per share, diluted (in €)¹⁾	2.80	3.42	-18

¹⁾ For the twelve months ended December 31, 2019 and 2018, the weighted average number of shares was 1,194 million (diluted: 1,194 million) and 1,194 million (diluted: 1,194 million), respectively (treasury stock excluded).

²⁾ In 2019, we renamed “cloud subscription and support” revenue and “cost of cloud subscription and support” to “cloud” revenue and “cost of cloud”, respectively, without changing the content of these line items.

Due to rounding, numbers may not add up precisely.

(B) Consolidated Statements of Financial Position

as at 12/31/2019 and 12/31/2018

€ millions	2019	2018 ¹⁾
Cash and cash equivalents	5,314	8,627
Other financial assets	297	448
Trade and other receivables	7,933	6,362
Other non-financial assets	1,179	889
Tax assets	469	293
Total current assets	15,193	16,620
Goodwill	29,162	23,736
Intangible assets	4,491	3,227
Property, plant, and equipment	5,497	3,553
Other financial assets	2,337	1,536
Trade and other receivables	129	118
Other non-financial assets	1,701	1,301
Tax assets	434	397
Deferred tax assets	1,286	1,014
Total non-current assets	45,037	34,881
Total assets	60,229	51,502
€ millions	2019	2018 ¹⁾
Trade and other payables	1,576	1,491
Tax liabilities	249	611
Financial liabilities	3,273	1,125
Other non-financial liabilities	4,809	4,120
Provisions	266	110
Contract liabilities	4,289	3,028
Total current liabilities	14,464	10,486
Trade and other payables	8	129
Tax liabilities	548	495
Financial liabilities	12,924	10,553
Other non-financial liabilities	799	501
Provisions	478	270
Deferred tax liabilities	80	102
Contract liabilities	89	88
Total non-current liabilities	14,926	12,138
Total liabilities	29,390	22,624
Issued capital	1,229	1,229
Share premium	545	543
Retained earnings	28,798	27,407
Other components of equity	1,772	1,234
Treasury shares	-1,580	-1,580
Equity attributable to owners of parent	30,764	28,832
Non-controlling interests	76	45
Total equity	30,839	28,877
Total equity and liabilities	60,229	51,502

¹⁾ Under the adoption method we chose for IFRS 16, prior years are not restated to conform to the new policies. See section (K) *Accounting Policy Changes* in this Quarterly Statement.

Due to rounding, numbers may not add up precisely.

(C) Consolidated Statements of Cash Flows

€ millions	Q1-Q4 2019	Q1-Q4 2018 ¹⁾
Profit (loss) after tax	3,387	4,088
Adjustments to reconcile profit (loss) after tax to net cash flows from operating activities:		
Depreciation and amortization	1,872	1,362
Share-based payment expense	1,818	830
Income tax expense	1,231	1,511
Financial income, net	-196	47
Decrease/increase in allowances on trade receivables	14	-67
Other adjustments for non-cash items	-54	3
Decrease/increase in trade and other receivables	-1,495	136
Decrease/increase in other assets	-574	-477
Increase/decrease in trade payables, provisions, and other liabilities	326	240
Increase/decrease in contract liabilities	1,007	-561
Share-based payments	-1,257	-971
Interest paid	-341	-251
Interest received	97	99
Income taxes paid, net of refunds	-2,338	-1,687
Net cash flows from operating activities	3,497	4,303
Business combinations, net of cash and cash equivalents acquired	-6,215	-2,140
Proceeds from sales of subsidiaries or other businesses	61	0
Purchase of intangible assets or property, plant, and equipment	-817	-1,458
Proceeds from sales of intangible assets or property, plant, and equipment	71	57
Purchase of equity or debt instruments of other entities	-900	-1,013
Proceeds from sales of equity or debt instruments of other entities	778	1,488
Net cash flows from investing activities	-7,021	-3,066
Dividends paid	-1,790	-1,671
Dividends paid on non-controlling interests	-17	-7
Proceeds from borrowings	3,622	6,368
Repayments of borrowings	-1,309	-1,407
Payments of lease liabilities	-404	0
Net cash flows from financing activities	101	3,283
Effect of foreign currency rates on cash and cash equivalents	110	97
Net decrease/increase in cash and cash equivalents	-3,313	4,617
Cash and cash equivalents at the beginning of the period	8,627	4,011
Cash and cash equivalents at the end of the period	5,314	8,627

¹⁾ Under the adoption method we chose for IFRS 16, prior years are not restated to conform to the new policies. See section (K) Accounting Policy Changes in this Quarterly Statement.

Due to rounding, numbers may not add up precisely.

Non-IFRS Numbers

(D) Basis of Non-IFRS Presentation

We disclose certain financial measures such as revenue (non-IFRS), expense (non-IFRS), and profit measures (non-IFRS) that are not prepared in accordance with IFRS and are therefore considered non-IFRS financial measures.

For a more detailed description of all of SAP's non-IFRS measures and their limitations as well as our constant currency and free cash flow figures, see [Explanation of Non-IFRS Measures](#) online.

(E) Reconciliation from Non-IFRS Numbers to IFRS Numbers

(E.1) Reconciliation from Non-IFRS Numbers to IFRS Numbers – Quarter

€ millions, unless otherwise stated	Q4 2019					Q4 2018			Δ in %		
	IFRS	Adj.	Non-IFRS	Currency Impact	Non-IFRS Constant Currency	IFRS	Adj.	Non-IFRS	IFRS	Non-IFRS	Non-IFRS Constant Currency ¹⁾
Revenue Numbers											
Cloud	1,897	11	1,908	-46	1,862	1,406	7	1,413	35	35	32
Software licenses	2,001	0	2,001	-36	1,965	2,089	0	2,089	-4	-4	-6
Software support	2,948	0	2,948	-54	2,894	2,825	0	2,826	4	4	2
Software licenses and support	4,950	0	4,950	-90	4,860	4,914	0	4,914	1	1	-1
Cloud and software	6,847	11	6,858	-136	6,722	6,320	7	6,327	8	8	6
Services	1,193	0	1,193	-22	1,171	1,108	0	1,108	8	8	6
Total revenue	8,040	11	8,051	-158	7,893	7,428	7	7,434	8	8	6
Operating Expense Numbers											
Cost of cloud	-661	80	-581			-587	52	-535	13	9	
Cost of software licenses and support	-590	37	-553			-574	18	-556	3	-1	
Cost of cloud and software	-1,251	117	-1,134			-1,161	70	-1,091	8	4	
Cost of services	-932	73	-859			-851	6	-845	9	2	
Total cost of revenue	-2,182	190	-1,993			-2,013	76	-1,936	8	3	
Gross profit	5,858	201	6,059			5,415	83	5,498	8	10	
Research and development	-1,190	118	-1,071			-945	2	-943	26	14	
Sales and marketing	-2,082	256	-1,825			-1,795	69	-1,726	16	6	
General and administration	-411	114	-296			-266	0	-266	54	11	
Restructuring	-28	28	0			7	-7	0	<-100	NA	
Other operating income/expense, net	-23	0	-23			-17	0	-17	34	34	
Total operating expenses	-5,915	707	-5,209	95	-5,113	-5,029	139	-4,889	18	7	5
Profit Numbers											
Operating profit (loss)	2,125	718	2,843	-63	2,780	2,399	146	2,545	-11	12	9
Other non-operating income/expense, net	-9	0	-9			2	0	2	<-100	<-100	
Finance income	246	0	246			102	0	102	>100	>100	
Finance costs	-121	0	-121			-189	0	-189	-36	-36	
Financial income, net	125	0	125			-87	0	-87	<-100	<-100	
Profit (loss) before tax	2,241	718	2,959			2,314	146	2,460	-3	20	
Income tax expense	-587	-179	-766			-622	-35	-658	-6	16	
Profit (loss) after tax	1,654	539	2,192			1,691	111	1,802	-2	22	
Attributable to owners of parent	1,636	539	2,175			1,686	111	1,797	-3	21	
Attributable to non-controlling interests	17	0	17			5	0	5	>100	>100	
Key Ratios											
Operating margin (in %)	26.4		35.3		35.2	32.3		34.2	-5.9pp	1.1pp	1.0pp
Effective tax rate (in %)²⁾	26.2		25.9			26.9		26.7	-0.7pp	-0.8pp	
Earnings per share, basic (in €)	1.37		1.82			1.41		1.51	-3	21	

¹⁾ Constant currency period-over-period changes are calculated by comparing the current year's non-IFRS constant currency numbers with the non-IFRS number of the previous year's respective period.

²⁾ The difference between our effective tax rate (IFRS) and effective tax rate (non-IFRS) in Q4 2019 and Q4 2018 mainly resulted from tax effects of share-based payment expenses and acquisition-related charges.

Due to rounding, numbers may not add up precisely.

(E.2) Reconciliation from Non-IFRS Numbers to IFRS Numbers – Year-to-Date

€ millions, unless otherwise stated	Q1–Q4 2019					Q1–Q4 2018			Δ in %		
	IFRS	Adj.	Non-IFRS	Currency Impact	Non-IFRS Constant Currency	IFRS	Adj.	Non-IFRS	IFRS	Non-IFRS	Non-IFRS Constant Currency ¹⁾
Revenue Numbers											
Cloud	6,934	81	7,014	-240	6,775	4,993	33	5,027	39	40	35
Software licenses	4,532	0	4,532	-101	4,431	4,647	0	4,647	-2	-2	-5
Software support	11,547	0	11,548	-263	11,285	10,981	0	10,982	5	5	3
Software licenses and support	16,080	0	16,080	-364	15,716	15,628	0	15,629	3	3	1
Cloud and software	23,014	81	23,094	-604	22,490	20,622	33	20,655	12	12	9
Services	4,539	0	4,539	-124	4,415	4,086	0	4,086	11	11	8
Total revenue	27,553	81	27,634	-728	26,905	24,708	33	24,741	12	12	9
Operating Expense Numbers											
Cost of cloud	-2,533	305	-2,228			-2,068	213	-1,855	22	20	
Cost of software licenses and support	-2,157	140	-2,018			-2,092	130	-1,962	3	3	
Cost of cloud and software	-4,690	445	-4,245			-4,160	343	-3,817	13	11	
Cost of services	-3,661	254	-3,407			-3,302	151	-3,151	11	8	
Total cost of revenue	-8,351	699	-7,652			-7,462	494	-6,969	12	10	
Gross profit	19,202	780	19,981			17,246	527	17,773	11	12	
Research and development	-4,279	427	-3,852			-3,624	219	-3,406	18	13	
Sales and marketing	-7,689	905	-6,783			-6,781	589	-6,192	13	10	
General and administration	-1,629	476	-1,153			-1,098	106	-992	48	16	
Restructuring	-1,128	1,128	0			-19	19	0	>100	NA	
Other operating income/expense, net	18	0	18			-20	0	-20	<-100	<-100	
Total operating expenses	-23,058	3,635	-19,423	474	-18,949	-19,005	1,426	-17,579	21	10	8
Profit Numbers											
Operating profit (loss)	4,495	3,716	8,211	-255	7,956	5,703	1,459	7,163	-21	15	11
Other non-operating income/expense, net	-73	0	-73			-56	0	-56	29	29	
Finance income	785	0	785			371	0	371	>100	>100	
Finance costs	-589	0	-589			-418	0	-418	41	41	
Financial income, net	196	0	196			-47	0	-47	<-100	<-100	
Profit (loss) before tax	4,618	3,716	8,334			5,600	1,459	7,059	-18	18	
Income tax expense	-1,231	-949	-2,180			-1,511	-349	-1,860	-19	17	
Profit (loss) after tax	3,387	2,767	6,154			4,088	1,111	5,199	-17	18	
Attributable to owners of parent	3,337	2,767	6,104			4,083	1,111	5,193	-18	18	
Attributable to non-controlling interests	50	0	50			6	0	6	>100	>100	
Key Ratios											
Operating margin (in %)	16.3		29.7		29.6	23.1		29.0	-6.8pp	0.8pp	0.6pp
Effective tax rate (in %)²⁾	26.7		26.2			27.0		26.3	-0.3pp	-0.2pp	
Earnings per share, basic (in €)	2.80		5.11			3.42		4.35	-18	18	

¹⁾ Constant-currency period-over-period changes are calculated by comparing the current year's non-IFRS constant-currency numbers with the non-IFRS number of the previous year's respective period.

²⁾ The difference between our effective tax rate (IFRS) and effective tax rate (non-IFRS) in 2019 mainly resulted from tax effects of share-based payment expenses, acquisition-related charges and restructuring expenses. The difference between our effective tax rate (IFRS) and effective tax rate (non-IFRS) in 2018 mainly resulted from tax effects of share-based payment expenses and acquisition-related charges.

Due to rounding, numbers may not add up precisely.

(F) Non-IFRS Adjustments – Actuals and Estimates

€ millions	Estimated Amounts for Full Year 2020	Q1–Q4 2019	Q4 2019	Q1–Q4 2018	Q4 2018
Operating profit (loss) (IFRS)		4,495	2,125	5,703	2,399
Revenue adjustments	0–30	81	11	33	7
Adjustment for acquisition-related charges	580–690	689	174	577	155
Adjustment for share-based payment expenses	1,200–1,600	1,818	505	830	–9
Adjustment for restructuring	10–20	1,128	28	19	–7
Operating expense adjustments		3,635	707	1,426	139
Operating profit (loss) adjustments		3,716	718	1,459	146
Operating profit (loss) (non-IFRS)		8,211	2,843	7,163	2,545

Due to rounding, numbers may not add up precisely.

(G) Non-IFRS Adjustments by Functional Areas

€ millions	Q4 2019					Q4 2018				
	IFRS	Acquisition-Related	SBP ³⁾	Restructuring	Non-IFRS	IFRS	Acquisition-Related	SBP ³⁾	Restructuring	Non-IFRS
Cost of cloud and software	–1,251	77	40	0	–1,134	–1,161	70	1	0	–1,091
Cost of services	–932	5	68	0	–859	–851	2	4	0	–845
Research and development	–1,190	2	117	0	–1,071	–945	4	–2	0	–943
Sales and marketing	–2,082	89	167	0	–1,825	–1,795	72	–3	0	–1,726
General and administration	–411	2	113	0	–296	–266	7	–8	0	–266
Restructuring	–28	0	0	28	0	7	0	0	–7	0
Other operating income/expense, net	–23	0	0	0	–23	–17	0	0	0	–17
Total operating expenses	–5,915	174	505	28	–5,209	–5,029	155	–9	–7	–4,889

€ millions	Q1–Q4 2019					Q1–Q4 2018				
	IFRS	Acquisition-Related	SBP ³⁾	Restructuring	Non-IFRS	IFRS	Acquisition-Related	SBP ³⁾	Restructuring	Non-IFRS
Cost of cloud and software	–4,690	308	137	0	–4,245	–4,160	264	78	0	–3,817
Cost of services	–3,661	9	245	0	–3,407	–3,302	9	142	0	–3,151
Research and development	–4,279	9	418	0	–3,852	–3,624	9	210	0	–3,406
Sales and marketing	–7,689	348	558	0	–6,783	–6,781	277	312	0	–6,192
General and administration	–1,629	16	459	0	–1,153	–1,098	18	88	0	–992
Restructuring	–1,128	0	0	1,128	0	–19	0	0	19	0
Other operating income/expense, net	18	0	0	0	18	–20	0	0	0	–20
Total operating expenses	–23,058	689	1,818	1,128	–19,423	–19,005	577	830	19	–17,579

³⁾ Share-based Payments

Due to rounding, numbers may not add up precisely.

If not presented in a separate line item in our income statement, the restructuring expenses would break down as follows:

€ millions	Q4 2019	Q1-Q4 2019	Q4 2018	Q1-Q4 2018
Cost of cloud and software	-2	-138	1	-3
Cost of services	13	-154	6	-3
Research and development	-19	-467	1	-3
Sales and marketing	-13	-298	-1	-11
General and administration	-6	-71	0	0
Restructuring expenses	-28	-1,128	7	-19

Due to rounding, numbers may not add up precisely.

Disaggregations

(H) Segment Reporting

(H.1) Segment Policies and Segment Changes

SAP has three reportable segments: the Applications, Technology & Services segment, the Intelligent Spend Group segment, and the Qualtrics segment.

As of the fourth quarter 2019, our customer experience offerings, which were formerly part of the Customer and Experience Management segment, became part of the Applications, Technology & Services segment through splitting and partial integration in other company functions. As a result of this change, we renamed the former Customer and Experience Management segment to Qualtrics segment. The expenses reflected in the Qualtrics segment, however, do not comprise the full impact of the acquisition due to the fact that some functions of Qualtrics mostly affecting general and administration expense have already been integrated into SAP's corporate functions.

For a more detailed description of SAP's segment reporting, see the Notes to the 2019 Consolidated Half-Year Financial Statements, Note (C.1).

(H.2) Segment Reporting – Quarter

Applications, Technology & Services

€ millions, unless otherwise stated	Q4 2019		Q4 2018	Δ in %	
	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
Cloud – SaaS/PaaS ¹⁾	902	882	670	35	32
Cloud – IaaS ²⁾	193	188	140	38	35
Cloud	1,094	1,070	809	35	32
Software licenses	2,001	1,965	2,088	-4	-6
Software support	2,944	2,890	2,822	4	2
Software licenses and support	4,945	4,855	4,909	1	-1
Cloud and software	6,039	5,925	5,718	6	4
Services	928	912	892	4	2
Total segment revenue	6,967	6,837	6,611	5	3
Cost of cloud – SaaS/PaaS ¹⁾	-306	-300	-280	9	7
Cost of cloud – IaaS ²⁾	-123	-120	-124	-1	-3
Cost of cloud	-428	-420	-404	6	4
Cost of software licenses and support	-541	-533	-538	1	-1
Cost of cloud and software	-970	-954	-942	3	1
Cost of services	-644	-634	-682	-6	-7
Total cost of revenue	-1,613	-1,588	-1,623	-1	-2
Segment gross profit	5,354	5,249	4,987	7	5
Other segment expenses	-2,066	-2,030	-1,941	6	5
Segment profit (loss)	3,288	3,219	3,046	8	6
Margins					
Cloud gross margin – SaaS/PaaS ¹⁾ (in %)	66.1	66.0	58.2	7.9pp	7.8pp
Cloud gross margin – IaaS ²⁾ (in %)	36.3	36.0	10.9	25.4pp	25.1pp
Cloud gross margin (in %)	60.8	60.7	50.0	10.8pp	10.7pp
Segment gross margin (in %)	76.8	76.8	75.4	1.4pp	1.3pp
Segment margin (in %)	47.2	47.1	46.1	1.1pp	1.0pp

¹⁾ Software as a service/platform as a service

²⁾ Infrastructure as a service

Due to rounding, numbers may not add up precisely.

Intelligent Spend Group

€ millions, unless otherwise stated	Q4 2019		Q4 2018	Δ in %	
	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
	Cloud – SaaS/PaaS ¹⁾	701	682	601	17
Cloud	701	682	601	17	14
Software licenses	1	1	0	>100	>100
Software support	3	3	4	-13	-16
Software licenses and support	4	4	4	-1	-4
Cloud and software	705	686	605	17	13
Services	125	122	116	7	5
Total segment revenue	830	808	721	15	12
Cost of cloud – SaaS/PaaS ¹⁾	-154	-151	-132	17	14
Cost of cloud	-154	-151	-132	17	14
Cost of software licenses and support	-3	-3	-2	>100	100
Cost of cloud and software	-157	-154	-134	18	15
Cost of services	-81	-79	-88	-9	-11
Total cost of revenue	-238	-232	-222	7	5
Segment gross profit	592	575	499	19	15
Other segment expenses	-420	-409	-352	19	16
Segment profit (loss)	172	166	147	17	13
Margins					
Cloud gross margin – SaaS/PaaS ¹⁾ (in %)	78.0	77.9	78.0	0.0pp	-0.1pp
Cloud gross margin (in %)	78.0	77.9	78.0	0.0pp	-0.1pp
Segment gross margin (in %)	71.3	71.2	69.2	2.1pp	2.0pp
Segment margin (in %)	20.7	20.6	20.4	0.4pp	0.2pp

¹⁾ Software as a service/platform as a service

Due to rounding, numbers may not add up precisely.

Qualtrics

€ millions, unless otherwise stated	Q4 2019		Q4 2018	Δ in %	
	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
	Cloud – SaaS/PaaS ¹⁾	110	107	NA	NA
Cloud	110	107	NA	NA	NA
Software licenses	0	0	NA	NA	NA
Software support	0	0	NA	NA	NA
Software licenses and support	0	0	NA	NA	NA
Cloud and software	110	107	NA	NA	NA
Services	46	44	NA	NA	NA
Total segment revenue	156	151	NA	NA	NA
Cost of cloud – SaaS/PaaS ¹⁾	-11	-11	NA	NA	NA
Cost of cloud	-11	-11	NA	NA	NA
Cost of software licenses and support	0	0	NA	NA	NA
Cost of cloud and software	-11	-11	NA	NA	NA
Cost of services	-28	-27	NA	NA	NA
Total cost of revenue	-39	-38	NA	NA	NA
Segment gross profit	117	113	NA	NA	NA
Other segment expenses	-127	-123	NA	NA	NA
Segment profit (loss)	-10	-10	NA	NA	NA
Margins					
Cloud gross margin – SaaS/PaaS ¹⁾ (in %)	90.1	90.0	NA	NA	NA
Cloud gross margin (in %)	90.1	90.0	NA	NA	NA
Segment gross margin (in %)	74.9	74.8	NA	NA	NA
Segment margin (in %)	-6.5	-6.4	NA	NA	NA

¹⁾ Software as a service/platform as a service

Due to rounding, numbers may not add up precisely.

Reconciliation of Cloud Revenues and Margins

€ millions, unless otherwise stated		Q4 2019		Q4 2018	Δ in %	Δ in %
		Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
Cloud revenue – SaaS/PaaS ¹⁾	Intelligent Spend Group segment	701	682	601	17	14
	Other ³⁾	1,014	992	672	51	48
	Total	1,715	1,674	1,273	35	31
Cloud revenue – IaaS ²⁾		193	188	140	38	35
Cloud revenue		1,908	1,862	1,413	35	32
Cloud gross margin – SaaS/PaaS ¹⁾ (in %)	Intelligent Spend Group segment	78.0	77.9	78.0	0.0pp	–0.1pp
	Other ³⁾	70.0	70.0	58.5	11.5pp	11.5pp
	Total	73.3	73.3	67.7	5.6pp	5.5pp
Cloud gross margin – IaaS ²⁾ (in %)		36.3	36.0	10.9	25.4pp	25.1pp
Cloud gross margin (in %)		69.6	69.5	62.1	7.5pp	7.4pp

¹⁾ Software as a service/platform as a service

²⁾ Infrastructure as a service

³⁾ Other includes the Applications, Technology & Services segment, the Qualtrics segment, and miscellaneous. The individual revenue and margin numbers for the Applications, Technology & Services segment and the Qualtrics segment are disclosed on the previous pages.

Due to rounding, numbers may not add up precisely.

(H.3) Segment Reporting – Year-to-Date

Applications, Technology & Services

€ millions, unless otherwise stated	Q1–Q4 2019		Q1–Q4 2018	Δ in %	
	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
Cloud – SaaS/PaaS ¹⁾	3,244	3,153	2,347	38	34
Cloud – IaaS ²⁾	696	674	488	43	38
Cloud	3,939	3,826	2,835	39	35
Software licenses	4,523	4,421	4,645	-3	-5
Software support	11,532	11,269	10,969	5	3
Software licenses and support	16,054	15,691	15,614	3	0
Cloud and software	19,994	19,517	18,449	8	6
Services	3,550	3,463	3,305	7	5
Total segment revenue	23,544	22,980	21,753	8	6
Cost of cloud – SaaS/PaaS ¹⁾	-1,125	-1,091	-948	19	15
Cost of cloud – IaaS ²⁾	-493	-481	-428	15	12
Cost of cloud	-1,619	-1,572	-1,377	18	14
Cost of software licenses and support	-1,971	-1,931	-1,924	2	0
Cost of cloud and software	-3,590	-3,503	-3,300	9	6
Cost of services	-2,635	-2,582	-2,523	4	2
Total cost of revenue	-6,225	-6,085	-5,823	7	5
Segment gross profit	17,319	16,895	15,931	9	6
Other segment expenses	-7,444	-7,291	-7,008	6	4
Segment profit (loss)	9,875	9,604	8,922	11	8
Margins					
Cloud gross margin – SaaS/PaaS ¹⁾ (in %)	65.3	65.4	59.6	5.7pp	5.8pp
Cloud gross margin – IaaS ²⁾ (in %)	29.1	28.6	12.2	17.0pp	16.4pp
Cloud gross margin (in %)	58.9	58.9	51.4	7.5pp	7.5pp
Segment gross margin (in %)	73.6	73.5	73.2	0.3pp	0.3pp
Segment margin (in %)	41.9	41.8	41.0	0.9pp	0.8pp

¹⁾ Software as a service/platform as a service

²⁾ Infrastructure as a service

Due to rounding, numbers may not add up precisely.

Intelligent Spend Group

€ millions, unless otherwise stated

	Q1–Q4 2019		Q1–Q4 2018	Δ in %	
	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
Cloud – SaaS/PaaS ¹⁾	2,693	2,585	2,178	24	19
Cloud	2,693	2,585	2,178	24	19
Software licenses	0	0	0	-20	-21
Software support	15	14	16	-5	-9
Software licenses and support	15	14	16	-5	-9
Cloud and software	2,708	2,600	2,193	23	19
Services	476	458	436	9	5
Total segment revenue	3,184	3,057	2,629	21	16
Cost of cloud – SaaS/PaaS ¹⁾	-590	-569	-483	22	18
Cost of cloud	-590	-569	-483	22	18
Cost of software licenses and support	-11	-10	-6	69	63
Cost of cloud and software	-601	-579	-489	23	18
Cost of services	-352	-340	-324	9	5
Total cost of revenue	-953	-919	-813	17	13
Segment gross profit	2,231	2,138	1,816	23	18
Other segment expenses	-1,534	-1,476	-1,285	19	15
Segment profit (loss)	698	662	531	31	25
Margins					
Cloud gross margin – SaaS/PaaS ¹⁾ (in %)	78.1	78.0	77.8	0.2pp	0.2pp
Cloud gross margin (in %)	78.1	78.0	77.8	0.2pp	0.2pp
Segment gross margin (in %)	70.1	70.0	69.1	1.0pp	0.9pp
Segment margin (in %)	21.9	21.7	20.2	1.7pp	1.5pp

¹⁾ Software as a service/platform as a service

Due to rounding, numbers may not add up precisely.

Qualtrics

€ millions, unless otherwise stated	Q1-Q4 2019		Q1-Q4 2018	Δ in %	
	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
Cloud – SaaS/PaaS ¹⁾	371	353	NA	NA	NA
Cloud	371	353	NA	NA	NA
Software licenses	0	0	NA	NA	NA
Software support	0	0	NA	NA	NA
Software licenses and support	0	0	NA	NA	NA
Cloud and software	371	353	NA	NA	NA
Services	137	130	NA	NA	NA
Total segment revenue	508	483	NA	NA	NA
Cost of cloud – SaaS/PaaS ¹⁾	-33	-31	NA	NA	NA
Cost of cloud	-33	-31	NA	NA	NA
Cost of software licenses and support	0	0	NA	NA	NA
Cost of cloud and software	-33	-31	NA	NA	NA
Cost of services	-78	-74	NA	NA	NA
Total cost of revenue	-110	-106	NA	NA	NA
Segment gross profit	398	377	NA	NA	NA
Other segment expenses	-389	-368	NA	NA	NA
Segment profit (loss)	8	9	NA	NA	NA
Margins					
Cloud gross margin – SaaS/PaaS ¹⁾ (in %)	91.1	91.1	NA	NA	NA
Cloud gross margin (in %)	91.1	91.1	NA	NA	NA
Segment gross margin (in %)	78.3	78.1	NA	NA	NA
Segment margin (in %)	1.6	2.0	NA	NA	NA

¹⁾ Software as a service/platform as a service

Due to rounding, numbers may not add up precisely.

Reconciliation of Cloud Revenues and Margins

€ millions, unless otherwise stated		Q1-Q4 2019		Q1-Q4 2018	Δ in %	Δ in %
		Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
Cloud revenue – SaaS/PaaS ¹⁾	Intelligent Spend Group segment	2,693	2,585	2,178	24	19
	Other ³⁾	3,625	3,516	2,361	54	49
	Total	6,319	6,101	4,539	39	34
Cloud revenue – IaaS ²⁾		696	674	488	43	38
Cloud revenue		7,014	6,775	5,027	40	35
Cloud gross margin – SaaS/PaaS ¹⁾ (in %)	Intelligent Spend Group segment	78.1	78.0	77.8	0.2pp	0.2pp
	Other ³⁾	68.4	68.5	60.0	8.4pp	8.5pp
	Total	72.6	72.5	68.6	4.0pp	4.0pp
Cloud gross margin – IaaS ²⁾ (in %)		29.1	28.6	12.2	17.0pp	16.4pp
Cloud gross margin (in %)		68.2	68.1	63.1	5.2pp	5.1pp

¹⁾ Software as a service/platform as a service

²⁾ Infrastructure as a service

³⁾ Other includes the Applications, Technology & Services segment, the Qualtrics segment, and miscellaneous. The individual revenue and margin numbers for the Applications, Technology & Services segment and the Qualtrics segment are disclosed on the previous pages.

Due to rounding, numbers may not add up precisely.

(I) Revenue by Region (IFRS and Non-IFRS)

(I.1) Revenue by Region (IFRS and Non-IFRS) – Quarter

€ millions	Q4 2019					Q4 2018			Δ in %		
	IFRS	Adj.	Non-IFRS	Currency Impact	Non-IFRS Constant Currency	IFRS	Adj.	Non-IFRS	IFRS	Non-IFRS	Non-IFRS Constant Currency ¹⁾
Cloud Revenue by Region											
EMEA	609	0	609	-8	601	407	0	407	50	50	48
Americas	1,047	11	1,058	-29	1,029	824	7	831	27	27	24
APJ	242	0	242	-10	232	175	0	175	38	38	33
Cloud revenue	1,897	11	1,908	-46	1,862	1,406	7	1,413	35	35	32
Cloud and Software Revenue by Region											
EMEA	3,173	0	3,173	-34	3,139	2,946	0	2,946	8	8	7
Americas	2,611	11	2,622	-66	2,556	2,379	7	2,386	10	10	7
APJ	1,063	0	1,063	-36	1,027	995	0	995	7	7	3
Cloud and software revenue	6,847	11	6,858	-136	6,722	6,320	7	6,327	8	8	6
Total Revenue by Region											
Germany	1,220	0	1,220	0	1,220	1,139	0	1,139	7	7	7
Rest of EMEA	2,465	0	2,465	-38	2,427	2,287	0	2,287	8	8	6
Total EMEA	3,685	0	3,685	-38	3,647	3,426	0	3,426	8	8	6
United States	2,496	11	2,507	-71	2,436	2,303	7	2,309	8	9	5
Rest of Americas	627	0	627	-9	618	543	0	543	16	16	14
Total Americas	3,122	11	3,134	-79	3,054	2,845	7	2,852	10	10	7
Japan	341	0	341	-21	320	280	0	280	22	22	14
Rest of APJ	892	0	892	-20	872	876	0	876	2	2	0
Total APJ	1,233	0	1,233	-41	1,192	1,156	0	1,156	7	7	3
Total revenue	8,040	11	8,051	-158	7,893	7,428	7	7,434	8	8	6

¹⁾ Constant currency period-over-period changes are calculated by comparing the current year's non-IFRS constant currency numbers with the non-IFRS numbers of the previous year's respective period.

Due to rounding, numbers may not add up precisely.

(I.2) Revenue by Region (IFRS and Non-IFRS) – Year-to-Date

€ millions	Q1–Q4 2019					Q1–Q4 2018			Δ in %		
	IFRS	Adj.	Non-IFRS	Currency Impact	Non-IFRS Constant Currency	IFRS	Adj.	Non-IFRS	IFRS	Non-IFRS	Non-IFRS Constant Currency ¹⁾
Cloud Revenue by Region											
EMEA	2,115	0	2,115	–30	2,085	1,441	0	1,441	47	47	45
Americas	3,946	81	4,026	–184	3,842	2,941	33	2,974	34	35	29
APJ	873	0	873	–25	847	611	0	611	43	43	39
Cloud revenue	6,934	81	7,014	–240	6,775	4,993	33	5,027	39	40	35
Cloud and Software Revenue by Region											
EMEA	10,212	0	10,212	–82	10,129	9,339	0	9,339	9	9	8
Americas	9,173	81	9,253	–411	8,843	7,973	33	8,006	15	16	10
APJ	3,629	0	3,629	–111	3,518	3,310	0	3,310	10	10	6
Cloud and software revenue	23,014	81	23,094	–604	22,490	20,622	33	20,655	12	12	9
Total Revenue by Region											
Germany	3,946	0	3,946	–2	3,944	3,658	0	3,658	8	8	8
Rest of EMEA	8,158	0	8,158	–92	8,067	7,446	0	7,446	10	10	8
Total EMEA	12,104	0	12,104	–94	12,010	11,104	0	11,104	9	9	8
United States	9,085	81	9,166	–450	8,716	7,880	33	7,914	15	16	10
Rest of Americas	2,109	0	2,109	–55	2,055	1,832	0	1,832	15	15	12
Total Americas	11,194	81	11,275	–505	10,771	9,713	33	9,746	15	16	11
Japan	1,180	0	1,180	–75	1,105	963	0	963	23	23	15
Rest of APJ	3,074	0	3,074	–55	3,020	2,928	0	2,928	5	5	3
Total APJ	4,254	0	4,254	–130	4,125	3,891	0	3,891	9	9	6
Total revenue	27,553	81	27,634	–728	26,905	24,708	33	24,741	12	12	9

¹⁾ Constant-currency period-over-period changes are calculated by comparing the current year's non-IFRS constant-currency numbers with the non-IFRS number of the previous year's respective period.

Due to rounding, numbers may not add up precisely.

(J) Employees by Region and Functional Areas

Full-time equivalents	12/31/2019				12/31/2018			
	EMEA	Americas	APJ	Total	EMEA	Americas	APJ	Total
Cloud and software	6,501	4,426	5,361	16,288	6,341	4,268	5,374	15,983
Services	8,250	6,018	5,971	20,239	8,120	5,736	5,620	19,476
Research and development	12,710	5,793	9,131	27,634	12,478	5,651	8,930	27,060
Sales and marketing	10,205	10,368	5,209	25,781	9,843	9,452	4,918	24,213
General and administration	3,161	2,123	1,246	6,530	2,906	1,970	1,147	6,024
Infrastructure	2,220	984	654	3,859	2,160	951	631	3,742
SAP Group (12/31)	43,048	29,712	27,571	100,330	41,848	28,029	26,620	96,498
Thereof acquisitions ¹⁾	338	1,638	137	2,113	657	952	434	2,043
SAP Group (twelve months' end average)	42,697	29,368	27,092	99,157	40,496	27,454	25,759	93,709

¹⁾ Acquisitions closed between January 1 and December 31 of the respective year

Other Disclosures

(K) Accounting Policy Changes

(K.1) Adoption of IFRS 16

As of January 1, 2019, SAP changed its accounting policies to adopt IFRS 16 'Leases'. Under the IFRS 16 adoption method chosen by SAP, prior years are not restated to conform to the new policies. Consequently, the year over year changes in profit, assets and liabilities and cash flows in 2019 are impacted by the new policies.

The transition impact of the policy change as of January 1, 2019, was as follows:

- Property, plant and equipment are higher by €1.9 billion resulting from the recognition of right-of-use assets,
- Financial liabilities are higher by €2.1 billion due to the recognition of lease liabilities,
- Trade and other payables are lower by €0.1 billion due to the de-recognition of deferred rent.

In the fourth quarter (full year) of 2019, we have recognized in our consolidated income statement depreciation expense from right-of-use assets of €114 million (€396 million) and interest expense on lease liabilities of €16 million (€55 million).

IFRS 16 also affects SAP's cash flow statement in the fourth quarter (full year) of 2019 as follows:

- Operating cash flow increased by €116 million (€404 million),
- Cash flow from financing activities decreased by €116 million (€404 million).

The Free Cash Flow measure is not affected by this change.

Please also refer to section "Impact of the New Accounting Standard IFRS 16 'Leases'" in our 2019 Consolidated Half-Year Financial Statements for further explanations of the changes in accounting policies as a result of the adoption of IFRS 16.

For more information about the financial impacts of the adoption of IFRS 16, see the Notes to the 2019 Consolidated Half-Year Financial Statements, Note (D.3).

(L) Impact of Hyperinflation

We apply hyperinflation accounting for our subsidiaries in Argentina and Venezuela by restating the financial statements of these subsidiaries for the current period to account for changes in the general purchasing power of the local currency based on relevant price indexes at the reporting date. The restated financial statements of our subsidiaries in Venezuela and Argentina are translated at closing rates. The effects on SAP's consolidated income statements in the fourth quarter and the full year 2019 and on SAP's balance sheet as at December 31, 2019 are not material.

For more information about hyperinflation accounting, see the Notes to the 2019 Consolidated Half-Year Financial Statements, Note (C.4).

(M) Business Combinations and Divestments

(M.1) Business Combinations

We acquired several businesses during 2018 and 2019 which, since their acquisition date, have contributed to our consolidated income statement while they did not contribute in the respective comparison period. Callidus was acquired on April 5, 2018 and Qualtrics was acquired on January 23, 2019. Thus, our 2019 numbers include Callidus for the full year while our 2018 numbers only include Callidus from the acquisition date. Similarly, our 2019 numbers include Qualtrics from the acquisition date while our 2018 numbers do not include Qualtrics. The total of the amounts that the Callidus legal entities contributed in Q1/2019 (i.e. the period for which the comparable 2018 numbers exclude Callidus) and the amounts that Qualtrics contributed in 2019 (i.e. the period for which the comparable 2018 numbers exclude Qualtrics) are:

- cloud revenue
 - in the fourth quarter 2019 of €98 million (IFRS) and of €109 million (non-IFRS) (thereof €0 million (non-IFRS) in the Applications, Technology & Services segment and €109 million (non-IFRS) in the Qualtrics segment),
 - in the full year 2019 of €346 million (IFRS) and of €427 million (non-IFRS) (thereof €57 million (non-IFRS) in the Applications, Technology & Services segment and €370 million (non-IFRS) in the Qualtrics segment),
- operating profit
 - in the fourth quarter 2019 of –€172 million (IFRS) and of –€15 million (non-IFRS) (thereof €0 million (non-IFRS) in the Applications, Technology & Services segment and –€9 million (non-IFRS) in the Qualtrics segment),
 - in the full year 2019 of –€718 million (IFRS) and of €5 million (non-IFRS) (thereof €20 million (non-IFRS) in the Applications, Technology & Services segment and €9 million (non-IFRS) in the Qualtrics segment).

For more information about the 2019 business combinations, see the Notes to the 2019 Consolidated Half-Year Financial Statements, Note (D.1).

(M.2) Divestments

At the beginning of 2019, we sold one content as a service (CaaS) business to a third party. This sale generated

- a profit of €53 million in the first half of 2019, which is classified, in our consolidated income statement, as other operating income,
- incremental employee related expenses of €7 million in the first quarter 2019, that are classified, in our consolidated income statement, as cost of research and development.

(N) Miscellaneous Disclosures

(N.1) Changes in Estimates

At the beginning of 2019, we changed our estimate of the expected useful lives of certain computer hardware. The effect of this change is a reduction of actual and expected depreciation expense of

- €21 million in the fourth quarter 2019 (thereof €15 million in cost of cloud),
- €93 million in the full year 2019 (thereof €65 million in cost of cloud).

For more information regarding changes in estimates, see the Notes to the 2019 Consolidated Half-Year Financial Statements, Note (D.2).

(N.2) Financial Income, Net

Finance income mainly consists of gains from disposal of equity securities and IFRS 9-related fair value adjustments totaling €218 million in the fourth quarter 2019 (Q4/2018: €71 million) and €594 million in the full year 2019 (TY 2018: €227 million) respectively.

Finance costs mainly consist of losses from disposal or IFRS 9-related fair value adjustments of Sapphire Ventures investments totaling €26 million in the fourth quarter 2019 (Q4/2018: €19 million) and €151 million in the full year 2019 (TY 2018: €44 million) respectively, interest expense on financial liabilities amounting to €50 million in the fourth quarter 2019 (Q4/2018: €35 million) and €207 million in the full year 2019 (TY 2018: €106 million) respectively, and negative effects from derivatives amounting to €22 million in the fourth quarter 2019 (Q4/2018: €105 million) and €155 million in the full year 2019 (TY 2018: €206 million) respectively.

(N.3) Financial Instruments

In September 2019, we initiated our commercial paper program (“Commercial Paper”). As of December 31, 2019, we had €1.1 billion of Commercial Paper outstanding with maturities generally less than six months and the carrying amount amounted to €1.1 billion. The net proceeds from our commercial paper program (“Commercial Paper”) are being used for general corporate purposes, including dividends and share repurchases.

(N.4) S/4HANA Customers

In Q4 2019, SAP updated the definition of S/4HANA to more closely resemble categories commonly included in ERP. The main categories added include elements of Digital Supply Chain Management and Finance and Risk Management. This change affected the S/4HANA customer count as the customers of the added categories (as far as not also S/4HANA customer) have been included in the S/4HANA customer number. Prior period customer count numbers have been adjusted to conform with the updated definition. See the table below for a history of the S/4HANA adoption based on the updated definition.

S/4HANA Customers Since Q1 2017

Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019
~6,400	>6,900	~7,500	>8,500	~8,900	>9,500	>10,000	>11,100	~11,500	>12,000	>12,600	>13,800