



Carbon Footprint Verification Report for Amdocs

12th March 2019

Verification summary

Verifiers:	Hayley Maynard, Environmental Consultant, Carbon Footprint Ltd
Report reviewed by:	Rebecca Pattison, Environmental Consultant, Carbon Footprint Ltd
Authorised by:	Dr. Wendy Buckley, Client Director, Carbon Footprint Ltd
Inventory period verified:	1 st October 2017 to 30 th September 2018
Level of assurance:	Reasonable
Assurance being given to:	Amdocs 8 Hapnina St. Ra'anana, 43000 Israel
Verification Standard:	ISO 14064-3: 2006
Methodology used for the calculation:	ISO 14064-1 and Defra Guidelines

Statement of verification

6th March 2019

Scope

Amdocs engaged Carbon Footprint Ltd to review their FY2018 greenhouse gas (GHG) inventory and supporting evidence for the period 1st October 2017 to 30th September 2018.

Amdocs is responsible for the information within the GHG inventory. The responsibility of Carbon Footprint Ltd is to provide a conclusion as to whether the assertions made within the GHG inventory are in accordance with ISO 14064-1 and Defra Reporting Guidelines.

Methodology

The verification was led by Hayley Maynard, Senior Environmental Consultant, Carbon Footprint Ltd. Carbon Footprint Ltd completed the review in accordance with the 'ISO 14064 Part 3 (2006): *Greenhouse Gases: Specification with guidance for the validation and verification of greenhouse gas assertions*'.

The work was undertaken to provide a reasonable level of assurance with respect to the GHG assertions made. Carbon Footprint Ltd believes that the review of the GHG inventory calculations and associated evidence, coupled with this subsequent report, provides a reasonable and fair basis for our conclusion.

The following emissions data was verified:

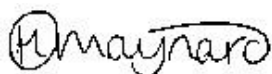
- **Scope 1:** 1,087tCO₂e: natural gas consumption, diesel consumption, fugitive emissions
- **Scope 2:** 58,270tCO₂e: purchased electricity (generation)
- **Scope 3:** 119,339tCO₂e: transmission & distribution of purchased electricity, electricity 'well-to-tank' emissions (generation and transmission & distribution) of purchased electricity, leased cars, bus, taxi, flights, paper use, plastic use, waste (including recycling) and water consumption.

Assurance opinion

Based on the results of our verification process, Carbon Footprint Ltd provides reasonable assurance that the GHG assertion:

- is materially correct;
- is a fair representation of the GHG emissions data and information; and
- is prepared in accordance with ISO 14064-1 and Defra guidelines.

It is our opinion that Amdocs has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of GHG emissions for the stated period and boundaries.



Hayley Maynard
Senior Environmental Consultant, Carbon Footprint Ltd
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1 Introduction

Amdocs provides customer care, billing and order management systems for telecommunications carriers and internet services. As a global company, Amdocs employs over 22,000 people and serves customers in over 80 countries worldwide.

This report provides the outcomes of the independent verification of Amdocs's GHG assertion for the period 1st October 2017 to 30th September 2018, as calculated by Amdocs.

The verification was based on an assessment of Amdocs's FY2018 GHG inventory calculation, supplemented with a telecom session and desk-based review of supporting evidence. A verification plan (Appendix 1) was devised at the preliminary stages of the assessment to guide the verification process. The sampling plan in Appendix 2 lists the documents submitted for verification.

The verification was undertaken in line with the International Standard ISO 14064-3: 2006 '*Greenhouse gases- Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions*' to a reasonable assurance level.

1.1 Objectives

The objectives of this verification are:

- To provide third-party assurance to Amdocs, to ISO 14064-3 standard, that the GHG assertion is reliable and of sufficient quality for external voluntary reporting to the CDP.
- To provide a verification statement that meets the requirements of CDP.
- To provide quality control and improve the accuracy of the GHG inventory by providing recommendations.
- To meet stakeholder and reputational requirements.

1.2 Scope

The GHG assertion that is being verified is Amdocs's Global Carbon Footprint for the period 1st October 2017 to 30th September 2018. The following sources of GHG emissions are within the scope of the verification:

- **Scope 1 (direct) emissions:** natural gas, diesel, fugitive emissions
- **Scope 2 (indirect) emissions:** purchased electricity (generation)
- **Scope 3 (other indirect) emissions:** purchased electricity (transmission & distribution), electricity 'well-to-tank' emissions (generation and transmission & distribution), business travel (taxi, bus and flights), leased cars, material use (paper and plastic), waste (including recycling) and water consumption.

1.3 Materiality

A qualitative and quantitative evaluation of errors, limitations or misrepresentations has been undertaken. The verification team, using professional judgment, determined whether any qualitative

discrepancies could affect the overall GHG assertion and, in turn, have a material impact on the decisions of the intended user.

Quantitative discrepancies were calculated individually to understand the impact of them as a percentage of the GHG Assertion. Any that were identified in the audit are documented in this verification report. The pre-defined materiality threshold is 5% of the total inventory.

1.4 Responsibility

Amdocs is responsible for the provision of the GHG assertion and the supporting information. Carbon Footprint Ltd was contracted to provide a third-party verification of this assertion, to a reasonable level of assurance. Appendix 3 provides a profile of the verification team.

1.5 The work undertaken

The verification undertaken by Carbon Footprint Ltd was conducted in accordance with ISO 14064-3: Greenhouse gases - part 3: *'Specification with guidance for the validation and verification of greenhouse gas assertions'*. A verification plan (including sampling) was devised at the preliminary stages of the work to guide the verification process (*see appendices*).

In conformance with the ISO 14064-3 standard, the following activities were undertaken:

- Initial review of Amdocs's GHG documentation and methodologies, including historical GHG data for the period 1st October 2017 to 30th September 2018.
- Telecom session involving discussions with staff from Amdocs regarding:
 - Scope of calculation, including appraisal boundaries.
 - Input data sets, any missing data, estimations made and assumptions.
 - Calculation methodology and conversion factors used.
 - Quality control procedures.
 - Results & interpretation.

1.6 Abbreviations

APAC	Asia-Pacific
BEIS	Business, Energy and Industry Strategy
CDC	Client Data Centre
Defra	Department for Environment, Food & Rural Affairs
DC	Data Centre
ECR	Engineered Computer Rooms
EHS	Environmental, Health & Safety
G-EHS	Global Environmental Health and Safety
GHG	Greenhouse Gas
GWP	Global Warming Potential
IEA	International Energy Agency
kWh	Kilowatt Hours
PS	Polystyrene

LDPE Low Density Polyethylene

tCO₂e Tonnes of Carbon Dioxide Equivalent

2 Verification results

2.1 Assessment of the GHG information system and its controls

2.1.1 Boundary and data selection

When considering the scope of the calculation, Amdocs Ltd was assessed as the global company. The organisation has consolidated its GHG emissions using the operational control approach.

Only Amdocs activity from Amdocs sites is included within the calculation. Any employee activity from customer sites is not included. Sites with less than 20 employees were not included within the scope of the calculation, as they are not material to the overall carbon footprint and data is difficult to obtain. The exemption to these is a few additional data centres; which although have no employees based on site are deemed to have a significant energy consumption.

2.1.1.1 Operational boundaries

GHG Emissions and removals associated with Amdocs's operations:

Figure 1 – assessment boundary

Scope 1 Direct Emissions	Scope 2 Energy Indirect	Scope 3 Other Indirect
<u>Fuel combustion</u> Diesel and Natural Gas	<u>Consumption of purchased electricity, heat steam and cooling</u> Electricity	<u>Purchased materials and fuels</u> Paper and plastic
<u>Owned Transport</u> None		<u>Transmission and distribution of energy</u> Electricity
<u>Process emissions</u> None		<u>Leased assets outsourcing and franchising</u> Company leased vehicles
<u>Fugitive emissions</u> Refrigerants		<u>Transport related activities*</u> Taxi, flights and bus travel
		<u>Sold goods and services</u> None
		<u>Waste Disposal and Water</u> Waste and water

Key:

Within the assessment boundary	Outside of assessment boundary
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*Rail, grey fleet car travel and some additional taxi and bus journeys have not been included as these are considered immaterial to the total carbon footprint and would not be cost effective to include.

2.1.2 Data management

Carbon Footprint Ltd has verified Amdocs's data management processes and found them appropriate and satisfactory. The consolidated spreadsheet is well organised, clearly marking estimations and providing explanations. Amdocs's regional EHS (Environmental Health and Safety) managers are responsible for the data collation and Amdocs's G-EHS (Global Environmental Health and Safety) Coordinator is responsible for the GHG inventory.

Amdocs's G-EHS Coordinator then carries out the emissions calculations. The results are analysed to identify any potential anomalies. Any significant increases or decreases in emissions are queried and supporting evidence may be asked for. Any missing monthly consumption data is estimated using data from actual month's figures (prorating technique) or using previous year's data.

The individual regions are responsible for reporting their own carbon emissions data, using data collection templates. Each site co-ordinator reports to the regional co-ordinator on a monthly basis. Currently, at the end of each financial year regional managers provide a breakdown of the information provided and the figures are then sanity checked by the G-EHS manager.

A file sharing system (MS SharePoint) is used to upload the data reports, as well as any supporting evidence/raw data. Amdocs undertakes data sampling as part of their quality control processes and requests a minimum of two utility bills from every site.

Note: *Amdocs updated its global procurement system in 2018. This led to some difficulties extracting raw data (particularly electricity bills), and a delay in Amdocs's FY18 carbon footprint calculations. Although the vast majority of raw data was ultimately located, a few verification documents were not accessible.*

2.2 Data limitations

Where utilities (i.e. electricity, waste and water) have been included within rental agreements, estimations have been made based on an average per employee, calculated using sites with actual data. Where information on refrigerant top-ups could not be provided, fugitive emissions have been estimated using an average per floor area based on actual data provided, split by unit type/size (ECR, CD, CDR). The next section provides further details on the assumptions and estimations made for specific emission sources.

2.3 Improvements / New Elements

Amdocs have continued to make improvements to their data management and calculation methodology, taking on board comments and observations made during the previous verification. This year Amdocs have added a new element; recycling of paper, batteries and WEEE, which is measured separately from the waste metrics.

2.4 Assessment of GHG data and information

Site electricity consumption, air travel and leased car fuel use account for 95.6% of Amdocs total GHG emissions and therefore the main focus of the verification and data checks was on these elements.

2.4.1 Electricity consumption

Electricity consumption accounts for 42.2% of Amdocs's total GHG emissions (including generation, transmission and distribution (T&D) and 'well-to-tank' (WTT) emissions).

The majority of sites have entered actual data into a monthly tracking spreadsheet. Approximately 22 sites have required some or full estimation, predominately due to electricity being included within the rental agreement or difficulty obtaining data. However, as these are generally the smaller sites (including some of the additional ECR only data centres) and they only account for approximately 4% of the total kWh consumed and therefore does not have a material impact on the carbon footprint.

Raanana (Israel), Champaign (USA), and Pune (India) account for 66% of the total kWh consumption. The data for these sites were sampled during the verification process. Observations are below:

Raanana (Israel) (Ganeri Shefa and Kenyon):

- Accounts for 30% of all of Amdocs's electricity consumption (in terms of kWh) and 13% of Amdocs's total GHG emissions.
- Until the end of 2017 consumption data was provided to Amdocs by the Raanana facilities team. This is no longer provided and EHS coordinators have a revised methodology for calculating Amdocs' consumption. A copy of the new methodology and kWh calculations was provided for Ganeri Shefa A and Ganeri Shefa B (Kenyon).
- Data is very accurate – based on monthly meter readings, and then apportioned based on occupied floor area. Based on the monthly consumption data Amdocs's are responsible for 96% of the site's total electricity use.
- The totals on the electricity data spreadsheet matched up with those used in the calculation spreadsheet.
- Primary data was viewed for Ganeri Shefa (March 2018 and July 2018) and calculations verified successfully.

Pune (India):

- Accounts for 18.7% of all of Amdocs's electricity consumption (in terms of kWh) and 11.6% of Amdocs's total GHG emissions.
- Utility bills were provided for October 2017, February 2018 and April 2018 for all towers and successfully cross checked with Amdocs's calculation spreadsheet.

Champaign (USA):

- Accounts for 17% of all of Amdocs's electricity consumption (in terms of kWh) and 5.6% of Amdocs's total GHG emissions.
- A utility bill statement was provided for each site meter, showing monthly consumption over the full data period. This was reviewed against the calculation spreadsheet entries and for the most part found to be correct. A small error (immaterial) was found in the data entry for one meter (no 07121162) for October and November 2017 (equating to 19,144 kWh, +10tCO₂e); however, this was corrected during the audit.

In addition, a small sample of data was also reviewed from a number of Amdocs's smaller sites and successfully verified against the calculation spreadsheet:

- **USA** – St Louis (March 2018, June 2018) – no errors found.
- **India** - GGN – Delhi (July 2018, September 2018) – minor amendments were made to 7 months data by the EHS coordinator following receipt of the verification documents from the site. The amendment was negligible, equating to 34,544 kWh (35tCO₂e) less than the original dataset.
- **USA** - Mt Laurel (March 2018 and July 2018) – no errors found.
- **Canada** - Montreal Canada DC (November 2017 and August 2018) – no errors found.

2.4.2 Natural gas consumption

This element only applies to four sites; Toronto, Champaign, Dusseldorf and Chiswick Park; where gas is used for office heating. Sites have reported accurate consumption for the data period (America in m³ and Germany in kWh), and the appropriate emission factors have been used within the calculation.

2.4.3 Diesel consumption

In India diesel generators are used as backup during electricity outages. Since 2017, diesel bills have been collated on a monthly basis (where applicable), and consumption is included within Amdocs's carbon calculations. The appropriate emission factor (100% mineral fuel) has been used.

2.4.4 Refrigerant loss

Following last year's site-wide study, Amdocs included refrigerant data from both air conditioning units and fire suppression systems. No sites reported a significant gas top-up during their FY18 service, therefore emissions have been calculated using the DEFRA's 'screening method'¹.

Air Conditioning Units

The calculations were made using the correct methodology detailed within DEFRA's 2013 Guidance document. Time used during the reporting period was considered to be 100% for all units, including new installations. Although new installations would have been added mid-year only one site was able to provide the installation date for their unit.

As no sites reported top-up data the 'Screening method' was used; based on the total capacity of the air-conditioning units, the global warming potential (GWP) of the refrigerant used and an estimated annual leakage rate of 3% (sourced from Defra's 2013 guidance). An installation emission factor of 0.5% was also considered for any new installations (sourced from Defra's 2013 guidance). For sites that did not provide any equipment information for the study, emissions have been estimated based on an average an average per floor area based on actual 'top-up' data provided, split by unit type/size (ECR, CD, CDR).

¹ DEFRA, 2013. Environmental Reporting Guidelines.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/206392/pb13944-env-reporting-guidance.pdf

Spot checks of the Global Warming Potentials used (sourced either from DEFRA or EPA) throughout the calculation were checked during the audit and deemed accurate.

Fire Suppression Systems

As above, calculations were based on the 'screening method'. As DEFRA does not provide a leakage rate for fire systems, an alternative factor (2.5%) was sourced from the EPA². For sites which didn't provide any equipment information for the study, assumptions have been made regarding the equipment size / refrigerant type (based on similar sites) to enable the emissions to be estimated.

2.4.5 Business travel

Scope 3 – leased cars, air, taxi and bus

Flights

Air travel accounts for 47% of Amdocs's total GHG emissions.

Information on flight travel is highly accurate, provided to Amdocs from travel provider reports, detailing total distance (miles) travelled and class of flight. The flight data is separated into two excel-based reports: India/APAC and Europe/Americas. These were provided during the audit for verification, and it was observed that recommendations from last year's verification had been taken onboard and implemented.

Amdocs separated the flight data by short-haul/long-haul (using Defra's guidance of up to 3,700km (2,300 miles) as short-haul), and by seat class (e.g. economy, first, business etc.).

Emission factors used are BEIS 2018 for short-haul and long-haul flights (not the international flights factor). Amdocs has made this decision as they feel the UK factors are more accurate and reputable.

Amdocs has been making efforts to reduce air travel. Compared to FY17 fewer flights were taken, however due to a higher proportion of long-haul flights (new offices in Pune and the Philippines) total air miles are comparable. If this initiative continues, in future years emissions from air travel should decrease.

Leased Car

Leased car use accounts for 6.2% of Amdocs's total GHG emissions.

For Israel, data on litres of fuel per fuel type (petrol and diesel) is obtained from a monthly automated billing system report. The appropriate emission factor (100% mineral fuel) has been used. **Note:** *Unlike in the UK fuel courts, in Israel there is no requirement for a biofuel blend within fuels.*

² EPA - GHG Inventory guidance

<https://www.epa.gov/sites/production/files/2015-07/documents/fugitiveemissions.pdf>

Upon request for sample data Amdocs discovered minor discrepancies between the team report and actual verification documents (January 2018-September 2018). This equated to an increase of 55,051 litres of petrol and 4,640 litres of diesel (combined total of 139tCO₂e). It is noted that there is likely to be a margin of error across remaining months (October-December 2017), however due to the new procurement system this data is no longer available to verify. However, this is estimated to equate to less than 0.01% of Amdocs's total GHG emissions (based on the average error found).

Moving forward (February 2019 onwards) Amdocs now have an automated system for collating fuel data on a monthly basis, to avoid the risk of human error when manually adding up figures from fuel card reports.

For Brazil, Amdocs has estimated the amount of fuel use by cars based on the average amount paid per employee per month. The cost was converted to US dollars and an average price of petrol in 2018 of 1.18 dollars per litre was used to estimate total litres of petrol. Though this is largely estimated and based on various assumptions, the associated carbon emissions only account for 0.2% of Amdocs's total GHG emissions and therefore any error is negligible.

I recommend that Amdocs investigates whether there are any other sites with company cars/leased vehicles that are not currently being recorded.

Taxi & Bus

As with previous years, bus and taxi data is only provided for Amdocs's sites in India. In January 2018 Amdocs switched to a new transport service provider (both shuttles and taxis), and no longer received mileage reports. As such taxi mileage (February 2018 – September 2018) has been estimated based on previous months. As the estimations equates to ~0.7% of Amdocs's total GHG emissions, any error as a result of this estimation is considered negligible. Another new supplier has been contracted from February 2019 and Amdocs hope to receive mileage reports in future.

For the bus travel, fuel use is estimated based on a vehicle average of 10km per gallon, which was then used to calculate the associated GHG emissions. This methodology was used as an alternative to the bus travel emission factor (CO₂/passenger.km) as the number of passengers was unknown. It is recommended that for future reporting, Amdocs review the potential with the transportation departments to source the actual fuel data for the dedicated Amdocs-only bus services. However, as bus emissions only account for 1% of Amdocs's total GHG emissions, any error is likely immaterial.

2.4.6 Other scope 3 activities

Paper & Plastic

Accuracy has continued to improve this year – information on the number of printing reams purchased (split into recycled and non-recycled sources) has been supplied by all sites. The total number of reams purchased across the company was used to calculate the total weight of paper used, and then converted into GHG emissions using the correct material use emission factor.

Amdocs splits plastic use into two categories; plastic cups (polystyrene) and plastic bags (LDPE). The emission factors used were found to be correct. Where data was unavailable, an average weight per employee was used. It is noted that it is more difficult to obtain data for the plastic bags as these are generally supplied by the outsourced cleaning companies rather than Amdocs.

Water

As with last year, accurate information on water usage has been obtained from utility bills for a small selection of sites (where obtainable). This information was used to estimate an average m³ per employee for “Big Sites” and “Small Sites”, and extrapolate across all Amdocs’s sites. Emissions have been calculated for both the supply of water and the treatment of wastewater.

Waste

Waste is mostly landlord-controlled and therefore limited data is available. As in previous years the total amount of waste has been estimated based on data for the Raanana and Sderot sites, for which Amdocs is supplied with monthly figures of waste in kg. An average waste per employee figure was calculated and used to extrapolate for all sites.

Both these sites (Raanana and Sderot) have large cooking kitchen facilities, along with three others (Pune, GGN and Cyprus). As food waste was considered to make up the majority of waste output at these sites, Amdocs has used the ‘food and drink’ waste factor.

For the remaining sites and estimations, the ‘commercial and industrial’ waste factor has been used. For sites without kitchen facilities, Amdocs have based calculations on 2/3 the average waste (kg) per employee of the two known sites above. Currently all waste is considered to be sent to landfill.

It is our opinion that Amdocs’s current method of waste reporting is likely an overestimation of associated emissions. We recommend that Amdocs continues to review what other data can be captured to aid future reporting, including whether comparisons against how much waste is recycled and landfilled can be made.

During the verification it was noticed that the waste calculation was picking up data from the incorrect data from the country data sheets (*using October 2017 data as an annual average instead of taking the full 12 months dataset*). The amendment to the calculation increased the total waste tonnes per employee, and overall equated to an additional 313tCO₂e. This was corrected as part of the audit.

Recycling

This is a new element introduced by Amdocs this year, where sites have separate collections for the recycling of paper/cardboard, batteries, and WEEE. This information is reported separately to the waste data collected above (Raanana and Sderot).

Electronic and battery waste data is obtained from IT and paper disposal through outsourced shredding services. Where landlord controlled and therefore no information was available, this has been excluded from the scope of the calculation.

Calculation and emission factors were checked as part of the verification and found to be correct.

2.5 Data calculations

The calculation layout and spreadsheet are consistent with previous years and is concise and easy to read. Overall the calculations are comprehensive and includes breakdown of the total emissions within tables and graphs so that an overall picture and comparison can be drawn. The calculations are conducted manually using excel spreadsheets. During the audit, spot checks were carried out on formulas used in the data calculation spreadsheet, as well as the emission factors used.

Amdocs has calculated its GHG inventory by using the 2018 BEIS emission factors and most recent electricity factors (published September 2018) from the International Energy Agency (IEA). The emission factors that were used are documented within the calculation spreadsheet and were found to be correct and appropriate for the data.

3 Conclusions

Amdocs has continued to use a detailed and organised calculation tool to assess their annual GHG emissions and improvements have been made in the collection of data and primary evidence. The calculations used BEIS and IEA carbon conversion factors and followed Defra guidelines. Amdocs's boundaries and system has satisfactorily captured the most significant emission sources.

Overall, calculations were very accurate. A couple of very minor errors were found, however (despite being immaterial; combined corrections accounted for only 0.24% of Amdocs's total global emissions) these were all corrected during the verification process and improvements noted for next year's calculations.

In conclusion, Carbon Footprint Ltd has verified Amdocs's GHG assertion in accordance with ISO 14064-3 (2006) standard to a reasonable level of assurance. It is our opinion that appropriate methodologies have been used and the GHG inventory result is of satisfactory accuracy subject to the boundary conditions that we have assessed.

3.1 Recommendations

Carbon Footprint Ltd understands the data limitations Amdocs has encountered. Below are several recommendations to assist Amdocs in improving the quality of their GHG assertion:

- Review opportunity for sites to record any refrigerant top-up rather than just the large top-ups which would enable Amdocs's to further streamlining carbon reporting for this element.
- Review the opportunity to capture actual fuel data from the transportation departments for bus travel.
- Review opportunities to increase accuracy of waste data and to capture the difference between recycled and landfill routes to disposal.

3.2 Assurance opinion

Based on the results of our verification process, Carbon Footprint Ltd provides reasonable assurance that the GHG assertion:

- is materially correct;
- is a fair representation of the GHG emissions data and information; and
- is prepared in accordance with ISO 14064-1 and the Defra guidelines.

It is Carbon Footprint Ltd's opinion that Amdocs has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of GHG emissions for the stated period and boundaries.

Appendix 1

Amdocs Verification Plan – Carbon Footprint 2018 (1st October 2017 to 30th September 2018)

28th February 2019

Venue: Telecom Session

Present:

Hayley Maynard, Carbon Footprint Ltd (Verifier)

Eran Doron, Amdocs

Malka Wertzner, Amdocs

ISO 14064-3 Ref.		ISO 14064-3 Verification Requirements	Evidence	Comments
4.3.1	Level of Assurance	To be agreed at the beginning	Anecdotal/email communication	Reasonable level of assurance
4.3.2	Objectives	To be agreed at the beginning	Anecdotal Verification report	For CDP and annual reporting
4.3.3	Criteria	To be agreed at the beginning	Anecdotal	Defra guidelines
4.3.4	Scope	Organisational boundaries, physical infrastructure & activities, GHG sources, type of GHGs, time period	Anecdotal Verification Report	Scope 1, 2 & 3 1 st October 2017 to 30 th September 2018 Operational control
4.3.5	Materiality	Establish materiality	Verification report	Materiality threshold = 5%
4.4.2	Verification Plan	Document assurance level, objectives, criteria, scope, materiality & schedule.	This document Agenda	The meeting agenda and this table documents the verification plan.
4.4.3	Sampling Plan	Develop a sampling plan.	Sampling Plan (Appendix 2)	Have seen primary data evidence for a small selection of sites. Have seen secondary data & calculations for other GHG sources.

ISO 14064-3 Ref.		ISO 14064-3 Verification Requirements	Evidence	Comments
4.5	Assessment of the GHG information system & its controls	Processes for collecting, processing and reporting GHG information.	Anecdotal Verification report	See this verification report.
4.6	Assessment of GHG data & information (Review of calculation methodology and conversion factors used)	Examination of the GHG data and information.	CF calculation spreadsheet, Verification report, emails.	
4.7	Assessment against verification criteria	Confirm whether the organisation conforms to the verification criteria.	Verification report	
4.8	Evaluation of the GHG assertion	Evaluate whether the evidence collected supports the GHG assertion. Conclude whether or not the GHG assertion is without material discrepancy and whether the verification activities provide the agreed level of assurance.	Verification report	
4.9	Verification statement	A verification statement containing the level of assurance, objectives, scope, criteria, the GHG assertion and the verifier's opinion on the GHG assertion.	Verification statement	A verification statement will be issued, including the relevant information required by CDP.
4.10	Verification records	The verifier shall maintain records to demonstrate conformity to the requirements of ISO14064-3.	This document. Verification report. Agenda.	This verification plan is the basis of recording the audit and capturing information.

Appendix 2 – Sampling Plan

The sampling will be a risk based approach in order to collect adequate evidence to support the reasonable level of assurance. Calculations and results will be reviewed and discussed as a desk-based exercise and during the telecom verification session.

Sites and data sampled were chosen due to the materiality to the total carbon footprint. In the 2018 footprint year, electricity, flights and leased car emissions were the highest contributing sources to Amdocs's carbon footprint, accounting for 95% of the total GHG emissions combined.

Primary data (e.g. utility bills, expense claims, fuel card reports etc.) requested:

- Electricity utility bills for:
 - **India** – Pune (October 2017, February 2018, April 2018)
 - **Israel** – Raanana Ganeri Shefa and Raanana Kenyon (November 2017, March 2018, July 2018)
 - **USA** – Champaign (August 2018, September 2018)
 - **USA** – St Louis (March 2018, June 2018)
 - **India** - GGN – Delhi (July 2018, September 2018)
 - **USA** - Mt Laurel (March 2018 and July 2018)
 - **Canada** - Montreal Canada DC (November 2017 and August 2018)
- Flights: global flights reports received this year
- Leased cars – annual summary fuel consumption report for Israel

Secondary data was reviewed for all sites and emission sources within the calculation spreadsheet.

Appendix 3

Carbon Footprint Ltd Verification Team

Carbon footprint Ltd has enabled the completion of the carbon footprints of over 20,000 businesses globally via our tools and consultancy. We are confident that we bring independent, ethical conduct, fair representation, due professional care and fresh insights to carbon management and verification activities.

We work with a vast range of companies, from SMEs to multinational blue-chip corporations with goals to comply with legislation, cut the cost of carbon in their business, maximise sales by developing true sustainable credentials and prepare for future legislation.

We are a world leading carbon footprinting company:

- We follow international standards, such as ISO14064-1, PAS2050, GHG Protocol, ISO14064-3 within our work
- We are ISO 14001:2015 and ISO 9001:2015 certified
- We are approved under the Quality Assurance Standard (QAS) - this means that our own carbon footprinting tools and methodology is independently audited by AEA-Ricardo.
- We work with other businesses to complete/validate GHG emissions for their Mandatory GHG Reporting and CDP reporting requirements
- We run the Carbon Academy (for peer group learning)
- We provide input and advice to the government on low carbon legislation

Hayley Maynard

Senior Environmental Consultant

Hayley has a Bachelor's degree in Environmental Science. She has conducted numerous carbon footprint assessments following ISO14064-1/ GHG Protocol and has experience in conducting various types of audits and verifications. She is also an ESOS Lead Assessor and Display Energy Certificate auditor.

Rebecca Pattison

Senior Environmental Consultant

Rebecca has over ten years of experience working in environmental management. She has worked with many organisations to help them calculate and reduce their carbon emissions. She is responsible for legislation and regulatory issues, and has also lead the implementation of auditing of environmental management systems (e.g. ISO14001). She is also an ESOS Lead Assessor.

Dr Wendy Buckley

Client Director / Co-Founder Carbon Footprint Ltd

Wendy has a B.Sc. & Ph.D. in Physics and is a member of the Chartered Institute of Marketing (MCIM). She has held various appointments across the globe in both the public and private sector. She has developed extensive knowledge in manufacturing, thermodynamic processes and low energy solutions. Wendy has won a number of business awards and is Chair Person of the Sustainable Business Network in North Hampshire.