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**The bigger the challenge,
the bigger the opportunity**
FY16 Basis of reporting

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FY2016 Basis of reporting

This document provides additional details about the scope and calculation methods used in the Deloitte 2016 Global Impact Report (the “Global Report”), available at www.deloitte.com/GlobalReport. It should be read in conjunction with the Global Report and all definitions used therein unless otherwise stated also apply to this document.

Defining Global Report content

Deloitte professionals engage continuously with key stakeholders, both internal and external, as part of routine business. Along with this ongoing engagement, in FY2015, DTTL commissioned a formal stakeholder engagement process and materiality assessment to assist with identifying key areas of impact upon which to focus the Global Report content. Given the level of effort involved in conducting the materiality assessment and the typical rate of change in stakeholders’ perspectives this process was not revisited for the FY2016 Global Report and the materiality assessment from FY15 was used in determining report content DTTL anticipates that future materiality assessments will take place every two to three years. For details of the materiality assessment, please review the [Basis of Reporting from our 2015 Global Report](#).

The Deloitte 2016 Global Report uses the Global Reporting Initiative’s (GRI’s) G4 guidelines in defining report content. While the FY2016 Global Report is not “in accordance” with core or comprehensive G4 guidelines, it includes the G4 index and identification of material indicators. DTTL recognizes that GRI has issued a new GRI Standard during 2016 but timing of the Standard’s release was such that there was insufficient time to address its requirements for FY16 reporting.

Scope and methods for performance measurements

DTTL adhered to widely accepted standards in developing the Global Report. These standards define a systematic approach to understanding the issues that the Global Report should cover and measuring and documenting performance with regard to those issues. Performance measures for societal impact and environmental sustainability are based on widely recognized guidelines.

For reporting on societal impact, DTTL considered the reporting standards from the Committee Encouraging Corporate Philanthropy (CECP) and the London Benchmarking Group (LBG). The monetary value of community activities was estimated according to the type of service performed. The value of volunteer work was based on local member firms’ staff costs. Pro bono work, defined as work that the member firms have delivered to not-for-profit organizations free of charge or at a significantly reduced rate, has been valued at fair market rates representative of the local member firms’ client service rates for comparable services.

Estimates of carbon emissions were prepared according to the Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard created by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), with emissions accounted for on the basis of operational control. While the reporting for FY2016 includes a significant number of Scope 3 sources, it does not consider full upstream and downstream emissions across all sources.

FY2016 environmental performance data in the Global Report was directly collected from 34 member firms and from DTTL. These entities represent 95 percent of aggregate Deloitte people and 97 percent of aggregate member firm revenues. Extrapolations were used to account for the emissions of the remainder of the organization that did not directly report data. FY2016 societal impact data was reported by 36 member firms and DTTL, which represent 98 percent of aggregate Deloitte people and 98 percent of aggregate member firm revenues. Estimates of societal impact contributions were not made for the member firms that did not report this data due to the wide range of societal impact activities across member firms. It should be recognized that these reporting gaps limit the year-to-year comparability of the data. Comparability is expected to improve over time as the number of nonreporting member firms decreases. Data that formed the basis of the reporting was obtained from financial reporting systems, other internal records, and outside sources such as travel agencies, utilities, and property managers. In FY2014, DTTL streamlined the way it reported environmental sustainability data. We have continued with these practices in FY2016 including the following:

- Refrigerants, district heating, and district cooling are excluded from aggregate network reporting as previous analysis showed these emission sources were not material to the overall GHG footprint.
- Paper consumption is tracked, but associated greenhouse gas emissions are not.

- Methane (CH₄) and nitrous oxide (N₂O) are not separately calculated in instances where published sources do not incorporate these into carbon-dioxide equivalent (CO₂e) factors.
- Global warming potentials (GWPs) incorporated into published emission factors are used “as is” and no attempt is made to reconcile to one common set of GWPs. Where choices can be made, we use the 100-year Fifth Assessment Report (AR5) with climate-carbon feedback incorporated as published by the Intergovernmental Panel on Climate Change.

Emission factors

- DTTL recommends its member firms select the most accurate, source-specific, localized, and recently published GHG emission factor available for each emission source, such as specific emission factors for a local electric utility. DTTL also provides member firms with default emission factors, the majority of which come from the following sources:
- The GHG Protocol published by the WRI and WBCSD;
- The International Energy Agency (IEA);
- The UK’s Department for Environment, Food and Rural Affairs (DEFRA); and
- The US Department of Energy (US DOE).

A compilation of emission factors used to calculate the data in the Global Report is included at the end of this section.

Changes from FY2015

In FY2016, environmental data gathering for all member firms was completed using a single carbon software system. The system was also used in FY2015 but only for three member firms. Member firms entered their building electricity and fuel usage and business travel, which was then converted to tonnes of carbon dioxide equivalent. Using a single system resulted in minor changes to some reporting elements due to identifying minor discrepancies in input data or changes to emission factors due to timing of updates or source consistency.

Additionally, the methodology for extrapolating member firm emissions was reviewed in FY2016. Based on this review and an analysis of materiality considerations the following changes were made to the GHG reporting process:

- Extrapolation was only done for the three most material emission sources: electricity, air travel and hotel stays.
- The multiplier for extrapolation is based on the weighted average of all reporting member firms for the specific activity data. In previous years the extrapolation multiplier was also based on geographical location and member firm size.

This change was made to simplify reporting. A thorough materiality assessment confirmed that these changes would not materially impact reported results. During review of this change it was identified that previous year’s extrapolations most likely overstated emissions from firm member firm fleet. Previous year’s emission were adjusted to address this issue resulting in a restatement of Scope 1 emissions for FY14 and FY15.

Building-related emission sources

Building-related emission sources included in the GHG emissions data of the Global Report were those associated with the use of electricity, heating oil, and natural gas in the office buildings and data centers that DTTL member firms either own or over which they have operational control. Upstream building-related emission sources, such as those associated with electric transmission and distribution line losses, were not included in the GHG emissions inventory.

Some of the activity data associated with building-related emission sources was available directly to the DTTL member firms. For example, some facilities have direct utility meters or submeters from which DTTL member firms obtain readings. For facilities that have no available meter data, activity data for the entire building was typically allocated on the basis of the percentage of total building floor space used (based on rentable square meters) by the DTTL member firm. Where building-specific data was unavailable, DTTL member firms estimated electricity and fuel usage using actual data from a similar building or an average from a recognized source.

A simplifying assumption is used for calculating the volume of diesel fuel used for backup power generation. It is assumed that diesel fuel purchased during the fiscal year is used that year. This method likely overestimates actual emissions in some years and underestimates them in others, but over time captures the related emissions.

Business travel—Air

Reported GHG emissions from air travel are those resulting from professionals flying for business reasons in accordance with DTTL and member firm policies. GHG emissions from flights taken by non-Deloitte personnel are also reported in instances where flight activity data are captured in DTTL or member firm travel systems and reimbursed or paid for by DTTL or a member firm (such as travel by family members in accordance with policies or

travel by prospective DTTL and member firm professionals). The majority of business air travel data was obtained from DTTL and member firm travel systems. Much of the rest was obtained from travel expense records.

The default GHG emission factors used to calculate emissions from air travel were based on information published by DEFRA. Flight segments were identified by distance, and emission factors were applied according to whether the flight segment was categorized as long haul (more than 1108 km), medium haul (463 to 1108 km) or short haul (less than 463 km). Seat class-specific emission factors (e.g., First, Business, Premium Economy, Economy) were used for a small number of member firms as experience in FY2014 led us to drop class-specific factors from Deloitte US data due to uncertainty associated with seat-class identification. The DEFRA emission factors used incorporated an uplift factor to account for nondirect routes, delays, and circling, but exclude radiative forcing and indirect emissions.

Business travel—Road

Reported GHG emissions from business travel by automobiles includes travel in Deloitte-owned vehicle fleets (personnel driving in vehicles owned by DTTL and/or the member firm), reimbursed driving (personnel driving in personal cars for which they are reimbursed), rental cars (personnel driving in rented/hired cars for which the member firm pays), buses, and taxis (reimbursed personnel trips in buses, taxis, car-service vehicles, and limousines). For road travel, activity data was gathered from expense reports, rental agency records, travel agency records, company accounting systems, fuel receipts, odometer logs, and receipts or other records indicating distance and location of trip segments. When fuel information was available, GHG emissions are calculated on the basis of mobile combustion factors for the given fuel type. When only distance information was available, GHG emissions were calculated on the basis of average emissions factors (emissions per kilometer travelled) for vehicles according to vehicle type (bus or car), fuel type (diesel, petrol, hybrid, or unknown), and location.

A very limited amount of personnel commuting activity data for was available from member firms. Where available, this information was added to the emissions total.

Business travel—Rail

Rail travel accounts for GHG emissions from trips by personnel on subways, railways, and trams, with different GHG emission factors used for each type of rail system. Activity data sources included travel agency reports, expense reports, company accounting systems, receipts, and other records indicating the distance and location of trip segments. In cases where actual distance was unavailable, estimates were made using travel expense data and average travel costs per unit of distance traveled.

Accommodations

The GHG emissions inventory in the report includes emissions from accommodations at hotels, guest houses, and apartments for business reasons and in accordance with DTTL and member firm policies. Data was collected from corporate travel agency records, travel expense reports, and internal records.

Estimations

In calculating emissions, various estimations and extrapolations were made to account for known data gaps.

For many travel activities, activity information and cost data were available both from travel providers (reservation systems, travel agencies, or travel vendors) and from DTTL or member firm expense systems. Travel expenses recorded in DTTL or member firm expense systems often exceeded the corresponding expenses recorded by travel providers because of travel arrangements made outside of reservation systems or without travel agencies. In cases where such differences were identified, the travel activity data associated with the incremental cost was estimated based on the same proportion of cost to activity that was reflected by the travel system reservations.

Not every member firm has the capacity to report activity data for GHG emissions, and some member firms report on some, but not all, of the activities within the report boundaries. Ratios of emissions per full-time equivalent (FTE) by emission source were calculated for the member firms that reported, and averages of these ratios were calculated and used to estimate emissions for airlines, hotels and electricity. Consistent with other GRI indicators, emissions intensity per FTE was calculated using the FTE total at the reporting year-end (31 May 2016).

While the above description is intended to be as accurate as possible, invariably the inventory will contain some exceptions to this reporting basis. None of the known exceptions are considered to materially change the total emissions reported.

Emission factors

The table below shows emission factors that were used in the inventory. Where factors are used in specific countries only, these are listed after the emission source.

Emission source	Emission factor	Unit kg co ₂ e/unit	Reference
Air Travel (various lengths and seat classes)	0.080-0.318	Passenger km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2); various factors used depending on class and distance
Bus (Europe)	0.112	Passenger km	Defra's 2013 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting
Bus (Outside Europe)	0.067	Passenger km	WRI Emission Factors from Cross Sector Tools (April 2014)
Electricity (Canada)	2-750	MWh	Environment Canada National Inventory Report 1990-2013
Electricity (China)	810-1130	MWh	Government of China; CDM Report
Electricity (India)	820	MWh	CO2 Baseline Database for the Indian Power Sector—User Guides—2015
Electricity (Japan)	454-816	MWh	Various Japanese Power Companies
Electricity (Mexico)	478	MWh	Electricity Federal Commission Life Cycle Analysis (LCA)
Electricity (New Zealand)	130	MWh	New Zealand Ministry of Economic Development—Quarterly Energy Update
Electricity (South Africa)	1030	MWh	Eskom's 2016 data
Electricity (Switzerland)	30	MWh	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Electricity (UK)	494	MWh	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Electricity (U.S.)	410-1831	MWh	USEPA eGRID2012
Electricity (various countries)	8-1347	MWh	IEA Statistics, "CO2 Emissions from Fuel Combustion Highlights." 2015 Edition
Hotel Stays	32.1	Nights	Based on select information from Green Hotels Global™ Q3 2015
Hotel Stays (New Zealand)	2.56-7.97	Nights	Carbonzero.co.nz
Mobile Combustion—Car (Average) (various fuels) (Finland, Luxembourg)	0.131-0.135	Km	Actual information from the fleet company
Mobile Combustion—Car (Diesel)	2.602	Liter	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Mobile Combustion—Car (various fuels) (New Zealand)	2.36	Liter	Ministry for the Environment, Guidance for voluntary, corporate greenhouse gas reporting
Mobile Combustion—Car (Petrol/Gasoline)	2.191	Liter	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Mobile Combustion—Car (unknown fuel)	0.248	Km	DTTL estimated using data from WRI Emission Factors from Cross Sector Tools (April 2014)
Mobile Combustion—Car (unknown fuel) (Australia)	2.289	Liter	Australian Government - National Greenhouse & Energy Reporting Act 2008, Technical Guidelines 2012

Emission source	Emission factor	Unit kg co ₂ e/unit	Reference
Mobile Combustion— Car (unknown fuel) (New Zealand)	0.23	Km	Ministry for the Environment, Guidance for Voluntary, Corporate Greenhouse Gas Reporting
Mobile Combustion— Car or Van (various fuels) (Netherlands)	2.78–3.14	Liter	Stichting Klimaatvriendelijk Aanbesteden en Ondernemen (SKAO)
Mobile Combustion— Car various fuels (Europe)	0.185–0.194	Km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Mobile Combustion— Van (various fuels)	0.211–0.251	Km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Mobile Combustion— Luxury Car (various fuels)	0.240–0.340	Km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Mobile Combustion— Motorcycle	0.120	Km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Mobile Combustion— Outside Europe Car (Average) (various fuels)	0.387–0.450	Mile	WRI Emission Factors from Cross Sector Tools (April 2014)
Mobile Combustion— Taxi	0.150	Passenger km	WRI Emission Factors from Cross Sector Tools (April 2014)
Mobile Combustion— Taxi (New Zealand)	0.31	Passenger km	Ministry for the Environment, Guidance for voluntary, corporate greenhouse gas reporting
Mobile Combustion— Car service (U.S.)	0.451	Passenger mile	Specific information from service providers
Mobile Combustion— Taxi (UK)	0.177	Passenger km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Mobile Combustion— Car (Hybrid)	0.134	Km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Mobile Combustion— Black Car/Limo	0.219	Passenger km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Rail—Average (Light Rail or Tram)	0.164	Passenger km	WRI Emission Factors from Cross Sector Tools (April 2014)
Rail—National Rail	0.185	Passenger km	WRI Emission Factors from Cross Sector Tools (April 2014)
Rail—Subway	0.164	Passenger km	WRI Emission Factors from Cross Sector Tools (April 2014)
Rail (Eurostar)	0.012	Passenger km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Rail (Germany)	0.075	Passenger km	Deutsche Bahn
Rail (Netherlands)	0.030	Passenger km	National Rail
Rail (UK)	0.047	Passenger km	Defra's 2014 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting (version 1.2)
Stationary Combustion—Diesel/ Heating Oil	2.691	Liter	WRI Emission Factors from Cross Sector Tools (April 2014)
Stationary Combustion—LNG	1.229	Liter	Defra's 2016 Government Greenhouse Gas (GHG) Conversion Factors for Company Reporting

Emission source	Emission factor	Unit kg co ₂ e/unit	Reference
Stationary Combustion—Liquefied Petroleum Gas (LPG)	1.615	Liter	WRI Emission Factors from Cross Sector Tools (April 2014)
Stationary Combustion—Liquefied Petroleum Gas—LPG (Mexico)	2.54	Liter	Mexicanuih. Mexican Life Cycle Inventory Database.
Stationary Combustion—Natural Gas (Japan)	2.244	Cubic meters	HV-gas company
Stationary Combustion—Natural Gas (Low Heating Value)	1.890	Cubic meters	WRI Emission Factors from Cross Sector Tools (April 2014)
Stationary Combustion—Natural Gas (Switzerland)	0.184	kW=h	Swiss National Inventory Report of Switzerland
Stationary Combustion—Natural Gas (New Zealand)	0.188	kWh	Ministry for the Environment, Guidance for voluntary, corporate greenhouse gas reporting

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