

# IGZ'S CARBON FOOTPRINT REPORT 2019 \_

CONDUCTED BY: EL CUBO VERDE,  
SOLUCIONES AMBIENTALES S.L

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# EXECUTIVE SUMMARY

A Carbon Footprint is the measurement of greenhouse gases (GHG)<sup>1</sup> emitted directly or indirectly by an individual, organization, event or product.

It shows the environmental impact through the realization of an inventory of the emissions associated with the different GHG sources. Once the carbon footprint has been calculated, mitigation and/or compensation measures can be implemented.



## WHO ARE INTELYGENZ?

Intelygenz (IGZ) is a professional services company that delivers A.I. enabled process automation and transformative digital products, empowering enterprises to do more with less, efficiently grow, and gain a competitive edge.

For over 18 years, we've been developing and deploying fully customised, highly-scalable solutions that solve specific business needs for our clients across many different industries.

In delivering these solutions, it's vital that we consider the environmental impacts our activity contributes to the world. Understanding our carbon footprint results allows us to identify and implement measures to reduce emissions and to track performance in achieving reduction and compensation targets.

<sup>1</sup>GHG: gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds. Six greenhouse gases were covered by the Kyoto Protocol – carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>).

## THIS REPORT

For the second year in a row, El Cubo Verde, soluciones ambientales S.L. ([www.elcuboverde.com](http://www.elcuboverde.com)) has been commissioned by Intelygenz (IGZ), to calculate Intelygenz's Carbon Footprint (CO<sub>2</sub>e) for the year 2019, taking as a reference the base year of the first IGZ's Carbon Footprint (2018) and its operational and organizational boundaries, which includes offices operating in Spain and USA (Madrid and San Francisco). (see *Annex I Company Profile*).

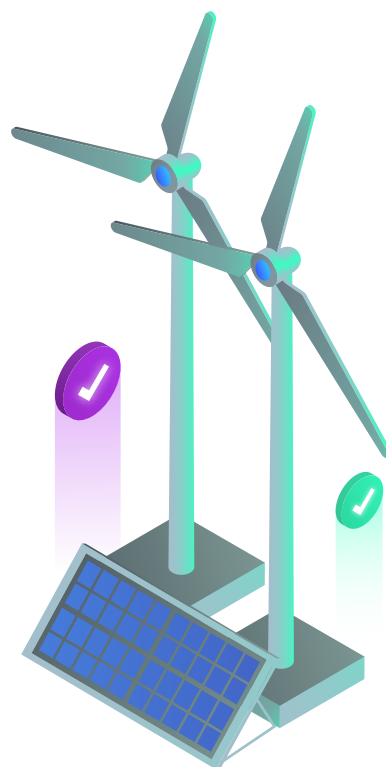
The *Intelygenz's Carbon Footprint Report 2019* has been prepared based of an exhaustive review of internal and external documentation and following interviews with key Intelygenz Company personnel.

It focuses primarily on targets and scopes decided by IGZ, pursued and defined by the definition of the organizational and operational boundaries and scopes, the performance of an inventory of GHG emissions, and the calculation of GHG emissions (CO<sub>2</sub>).

Additionally, a series of key measures were agreed to minimize the environmental impact in terms of reduction of GHG emissions, and to "neutralize" our carbon emissions through a Carbon offsetting fund project:

### 2020:

- Neutralization of IGZ's Carbon Footprint 2018 through the Carbon Offset Platform of United Nations.
- Reduction in year 2020 of at least a **15%** of IGZ's Carbon Footprint calculated for year 2018 by changing current electricity retail company by one with guarantees of 100% renewable energy origin; IGZ's replacement of 6 air-conditioning splits units containing R22 Head Office in Madrid; donation of obsolete ICT equipment to charitable organizations, and the extension of the carbon footprint calculation to other IGZ's activities (other means of transport, energy consumption from external Data centers, water and paper consumption, etc.). Some of these measures have already been undertaken but they do not correspond to 2019's Carbon footprint scope (see achievements during 2019 in chapter 7 "*Reduction and compensation measures of Intelygenz's carbon footprint*").



**BY WAY OF SUMMARY, THE CARBON FOOTPRINT CALCULATED BY IGZ ORGANIZATION IN 2019, INCLUDING SCOPES AND ITEMS SELECTED, AMOUNTS TO**

**130.01 TCO<sub>2</sub>e**

**DISAGGREGATED BY SCOPES AND ITEMS SELECTED:**

<sup>2</sup>The carbon dioxide equivalent is calculated using the mass of a given GHG multiplied by its global warming potential

## SCOPE 1 :

### DIRECT EMISSIONS 0.00 kgCO<sub>2</sub>e (MADRID OFFICES)

- On-site emissions: fossil fuel combustion
- Fugitive emissions: air conditioning equipment (fluorinated gases)
- Vehicle fleet



## SCOPE 2 :

### INDIRECT EMISSIONS 40.09 tCO<sub>2</sub>e (2019)

- Electricity consumption (Madrid Offices + California Office)



## SCOPE 3 :

### INDIRECT EMISSIONS: 89.92 tCO<sub>2</sub>e (2019)

- Business travels (flights) Mobility emissions: **89,488 kgCO<sub>2</sub>e**  
All domestic flights within the territory of the United States have been included this year (*new*).
- Train travels: **437.19 kgCO<sub>2</sub>e**  
Carbon footprint from domestic travels in Spain have been included for the first time in year 2019 (*new*).



The extension of **Scope 3** in year 2019 has led to a very significant increase in emissions generated by air travels, **37,995.00 kgCO<sub>2</sub>e** in 2018 compared to **89,488 kgCO<sub>2</sub>e** in 2019.

For this reason, the primary sources of greenhouse gas emissions in IGZ have been, business air travels (Scope 3) **69,1%**, followed by energy consumption (electricity) **30,9%** (Scope 2).

In 2019, the primary sources of GHG, in order of volume, was:

#### ENERGY CONSUMPTION (ELECTRICITY)

**30.9%**

(Scope 2)

#### BUSINESS AIR TRAVELS

**69.1%**

(Scope 3)

The Activity index defined for the IGZ's carbon footprint for year 2019 is, as in the precedent year, (kgCO<sub>2</sub>e/10,000.00 €):

#### ANNUAL TURNOVER:

**10,175,442.11 €**

#### TOTAL EMISSIONS OF CO<sub>2</sub>e:

**130,010 kgCO<sub>2</sub>e**

#### ACTIVITY INDEX 2019:

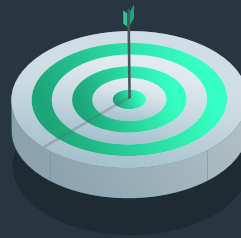
**127.76 KGCO<sub>2</sub>E /  
10,000 € INVOICED.**

(slightly superior to 113.10 kgCo<sub>2</sub>e/10,000 € invoiced in 2018, due to new CO<sub>2</sub> emissions sources included in Scope 3 ).

# TARGETS

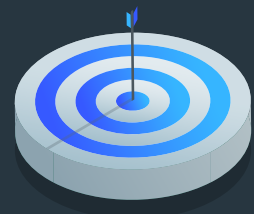
01

To **measure** the amount of greenhouse gases (GHG) generated by the company.



02

To **draw up an inventory** of GHG emissions for year 2019.



03

To **know the main GHG emitting sources** generated because of the business activity performed by IGZ.



04

To inform the staff of the company and to raise awareness about the challenges of climate change, **and measuring our carbon footprint as a necessary tool.**

05

To **register the Carbon Footprint** in the Spanish *Registry of Carbon Footprint, Offsetting and CO2 Removal* (Commitment Section A).

06

To **reduce**, when feasible, emissions intensity per volume of business (kgCO2/€) and, to **compensate IGZ's CO2e emissions.**

# METHODOLOGIES & SOURCES TO CALCULATE CARBON FOOTPRINT

Several methodologies may be employed to calculate the Carbon Footprint of organizations.

Despite others, Intelygenz' Carbon Footprint is based on the following methodologies and sources:

- Greenhouse Gas Protocol Corporate Standard (GHG Protocol):** developed by the World Resources Institute and the World Business Council for Sustainable Development, the GHG Protocol provides standards and guidance for companies and other organizations preparing a GHG emissions inventory. It covers the accounting and reporting of the six greenhouse gases covered by the Kyoto Protocol – carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and Sulphur hexafluoride (SF<sub>6</sub>). The U.S. EPA Center for Corporate Climate Leadership's (The Center). All data collected and analyzed within this report has followed the World Resources Institute (WRI) GHG Protocol principles of relevance, completeness, consistency, transparency and accuracy.
- UNE-ISO 14064-1:** from the International Organization for Standardization, a worldwide federation of national standards bodies: The ISO 14060 family provides clarity and consistency for quantifying, monitoring, reporting and validating or verifying GHG emissions and removals to support sustainable development through a low-carbon economy and to benefit organizations, project proponents and interested parties worldwide.
- "Emission factors: Carbon Footprint Registry, compensation and carbon dioxide absorption projects":** (Version 12, April 2019 and April 20, 2020), Ministry for the Ecological Transition and the Demographic Challenge. This document includes emission factors of the electricity mix of the trading companies operating in Spain in 2018 and 2019 (kg CO<sub>2</sub>/kWh) (Scope 2 of the carbon footprint). The calculation methodology used for registration in the Spanish Carbon Footprint Register is the one corresponding to "Organizations" (Scope 1 and 2 and 3).
- "UK Government GHG Conversion Factors for Company Reporting (2019). Conversion factors 2019\_Full set"** **"Conversion factor 2019. Full set": U.K.** (Government emission conversion factors for greenhouse gas company reporting, Department for Business, Energy & Industrial Strategy). (Source used for Scope 3: Air Business travels).
- "Carbon Footprint, Country specific electricity grid greenhouse gas emission factors" Carbon Footprint** (Last Updated: July 2020). United States Regional factors (by state) are sourced directly from the United States Environmental Protection Agency's (EPA) eGrid database. 2018 factors were published in February 2020. Next set due to be published in 2022.



# ORGANIZATIONAL AND OPERATIONAL BOUNDARIES

- **Organizational boundary:** The organizational boundary defines the businesses and operations that constitute Intelygenz for the purpose of accounting and reporting greenhouse gas emissions. The organizational boundary selected to calculate Intelygenz' carbon footprint is the "control approach" and it includes the office facilities in Madrid (Spain) and San Francisco (CA)<sup>3</sup>.
- **Operational boundary:** GHG emissions associated to the operations of the organization which involves identifying emissions sources associated with Intelygenz' business, categorizing them as either direct and indirect emissions. The operational boundary for Intelygenz' carbon footprint calculation includes the following scopes and sources:

## SCOPE 1 : DIRECT EMISSIONS

- On-site emissions: fossil fuel combustion
- Fugitive emissions: air conditioning equipment (fluorinated gases)
- Vehicle fleet

## SCOPE 2 : INDIRECT EMISSIONS

- Electricity consumption

## SCOPE 3 : INDIRECT EMISSIONS

- Business travel (flights) / Mobility emissions including domestic flights within the United States.
- National train travels

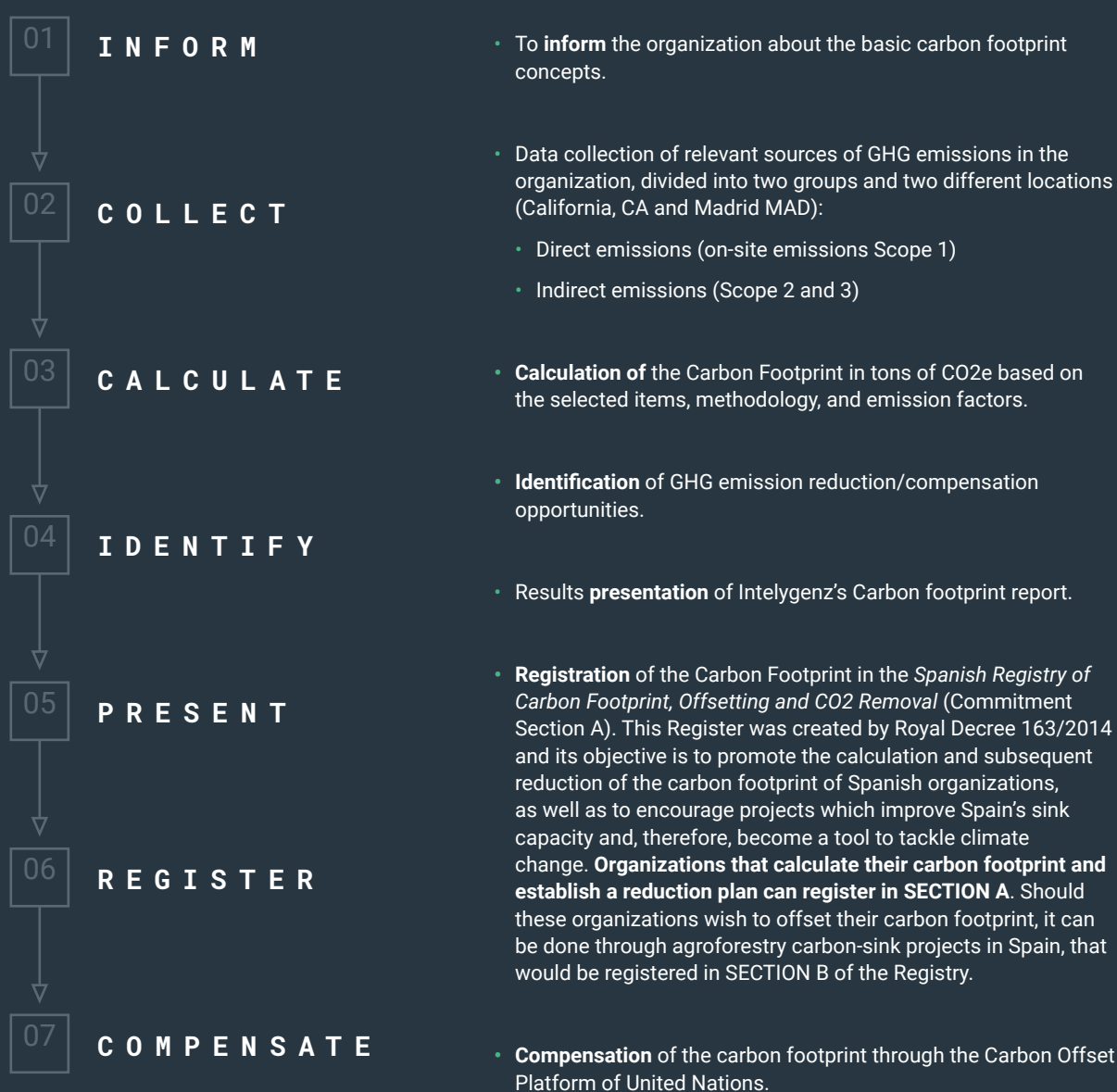


<sup>3</sup>Companies can choose to report either the emissions from operations over which they have financial or operational control (the control approach) or from operations according to their share of equity in the operation (the equity share approach).



# WORK PROCESS

The following activities have been carried out in close collaboration with El Cubo Verde, soluciones ambientales S.L, to report the Intelygenz's carbon footprint (Year 2019):



# INTELYGENZ'S CARBON FOOTPRINT

The following scopes and GHG emissions sources have been considered, to calculate the Intelygenz's Carbon Footprint (Year 2019):

## SCOPE 1: DIRECT EMISSIONS

Emissions from GHG sources owned or controlled by the organization.

There are no natural /fuel boilers on-site to heat Intelygenz' offices in Madrid (Spain) and California (USA), as electric heating and cooling is the current energy equipment in Madrid's offices, and in California, offices do not belong to Intelygenz.

Climatization equipment in the Head Office (Callao Office) is controlled by Intelygenz, but air-conditioning units from Office 2 (Gran Via, Madrid), are owned and controlled by the building's owner, lying outside the control of Intelygenz.

Historically, air conditioning and refrigeration equipment utilized various Ozone Depleting Substances (ODSs)<sup>4</sup>, primarily chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). These ODSs are being phased out of manufacture and use by EU legislation, the Montreal Protocol and the US Clean Air Act Amendments

of 1990 (Title VI), in the United States (e.g.: R22 hydrochlorofluorocarbon (HCFC) has been phased out from air conditioning systems since 1st January 2015, by the EC Ozone Regulation (No. 1005/2009). All R22, including recycled and reclaimed refrigerant, are now banned for use in maintenance and repairs. This ban is strictly observed by Intelygenz and R22 is no longer used to recharge/maintain the 6 existing units with R22 in Head Office in Madrid (**3 of them have been replaced in 2019**). Hydrofluorocarbons (HFCs) and, to a lesser extent, perfluorocarbons (PFCs) are used as substitutes for the regulated ODSs.

<sup>4</sup>These substances include a number of different compounds such as CFCs, HCFCs, and halons, which have 100-year global warming potentials (GWPs), which are typically greater than 1,000 times that of CO<sub>2</sub>, so their potential impact on climate change can be significant. Global Warming Potential (GWP) index, is based on radiative properties of GHGs, measuring the radiative forcing following a pulse emission of a unit mass of a given GHG in the present-day atmosphere integrated over a chosen time horizon, relative to that of carbon dioxide (CO<sub>2</sub>)

**TABLE 1: SCOPE 1 - DIRECT GHG EMISSIONS**

	Head Office Madrid	Gran Via Office Madrid	CA Brand Office San Francisco
<b>On-site emissions:</b> fossil fuel combustion	No Natural gas/ fuel boilers to heat building	No Natural gas/ fuel boilers to heat building	No Natural gas/ fuel boilers to heat building
<b>Fugitive emissions:</b> air conditioning equipment (fluorinated gases)	00.00 kg/CO2e	Not included	Not included
<b>Vehicle fleet</b>	No vehicle fleet owned or controlled by Intelygenz	No vehicle fleet owned or controlled by Intelygenz	No vehicle fleet owned or controlled by Intelygenz

NOTE1: Only three climatization units have been recharged

**TABLE 2: GLOBAL WARMING POTENTIAL (GWP) OF FLUORINATED GASES (BLENDS)**

Blends	Unit	Global Warming Potential (GWP) /kg CO2e
R404A	kg	3922
R407A	kg	2107
R407C	kg	1774
R407F	kg	1825
R408A	kg	3152
R410A	kg	2088
R507A	kg	3985
R508B	kg	13396
R403A	kg	3124

Source: Prepared by author on the basis of the *Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) 2007* and EU Regulation n° 517/2014.

**TABLE 3: SCOPE 1: INVENTORY OF AIR-CONDITIONING SPLITS UNITS IN INTELYGENZ'S HEAD OFFICE (MADRID) 2019:**

17 new **air-conditioning** units (rows marked in grey) have been added to the inventory in 2019, due to the expansion of the Head Office space (Santa María Soledad, Madrid) by approximately **800 meters** on the same floor of the building, and also due to the replacement of 1 ancient ROCA unit and 2 CARRIERS units.

To calculate carbon footprint of these new units, initial charge of fluorinated gas has been considered. No new recharges have been made during 2019.

Code	Units	Brand	Flourinated Gas/Initial Charge (kg)	/Initial charge (kg)	Power	Model
1	1	mitsubishi	R410	1.5	7.3	MUZ-GB50VA
2	1	GENERAL	R410	1.25	5.2	AOYB18LACL
3	1	KOSNER	R410	1.4	6.15	KSTI-18PEXT
4	1	CARRIER	R22	1.8	6.42	38YL-24A703EI-40
5	1	ROCA	R410	1.3	3.75	DBO-535-BG
6	1	KOSNER	R410	1.4	6.15	KSTI-18PEXT
7	1	ROCA	R410	1.3	3.75	DBO-35-BG
8	1	KOSNER	R410	1.4	6.15	KSTI-18PEXT
9	1	ROCA	R410	1.3	3.75	DBO-35-BG
10	1	FUJI	R410	1.25	5.2	ROA18LALL
11	1	HAIER	R410	1.2	5.3	1U18FS1ERA
12	1	CARRIER	R22	1.02	6.42	38YL-24A703EI-40
13	1	KOSNER	R410	1.4	6.15	KSTI-18P EXT
14	1	GENERAL	R410	1.25	5.2	AOYB18LACL
15	1	ROCA	R410	1.3	3.75	DBO-35-BG
16	1	GENERAL	R410	1.25	5.2	AOYB18LACL
17	1	KOSNER	R410	1.4	6.15	KSTI-18P EXT
18	1	ROCA	R410	1.3	3.75	DBO-35-BG
19	1	ROCA	R410	1.3	3.75	DBO-35-BG
20	1	HAIER	R410	1.2	5.3	1U18FS1ERA

Code	Units	Brand	Flourinated Gas/Initial Charge (kg)	/Initial charge (kg)	Power	Model
21	1	CARRIER	R22	1.02	6.42	38YL-24A703EI-40
22	1	KOSNER	R410	1.4	6.15	KSTI-18P EXT
23	1	KOSNER	R410	1.83	6.15	KSTI-18P EXT
24	1	KOSNER	R410	1.83	6.15	KSTI-18P EXT
25	1	MIDEA	R410	1.3	5.27	MO830-18HFN1-QRD0W
26	1	MIDEA	R410	1.3	5.27	MO830-18HFN1-QRD0W
27	1	MIDEA	R410	1.3	5.27	MO830-18HFN1-QRD0W
28	1	MIDEA	R410	1.3	5.27	MO830-18HFN1-QRD0W
29	1	MIDEA	R32	1.25	5.27	MO830-18HFN1-QRD0W
30	1	MIDEA	R410	1.3	5.27	M20D-18HFN8-Q
31	1	KAYSUN	R410	1.2	5.27	KUE18HV
32	1	SAMSUNG	R410	1.3	2.6	AJN026N
33	1	MIDEA	R410	1.3	5.27	MO830-18HFN1-QRD0W
34	1	KAYSUN	R410	1.5	1.9	KUE18
35	1	MIDEA	R410	1.0	3.52	MO830-12HFN1-QRD0W
36	1	KAYSUN	R410	1.5	1.9	KUE18
37	1	MIDEA	R410	1.3	5.27	MO830-18HFN1-QRD0W
38	1	MIDEA	R410	1.3	5.27	MO830-18HFN1-QRD0W

Air-conditioning units from Office 2 (Gran Via, Madrid), are owned and controlled by the building's owner, lying outside the control of Intelygenz. For this reason, they are not considered to calculate Intelygenz's carbon footprint.

Air-conditioning units from San Francisco Brand Office have not been considered for year 2019 as no data are available from the owner of the Work Center.

Intelygenz has no other relevant GHG emissions sources identified for Scope 1. There are no on-site fossil fuel combustion and only electric water heaters are used. There are no company owned vehicles nor process emissions.

## SCOPE 2 :

### INDIRECT EMISSIONS

GHG emissions consequence of an organization's operations and activities, but that arise from GHG sources that are not owned or controlled by the organization. (e.g.: GHG emissions from purchased energy).

**TABLE 4: ELECTRICITY CONSUMPTION\_IGZ MADRID HEAD OFFICE, GRAN VIA OFFICE AND SAN FRANCISCO OFFICE (CA) KWH/YEAR\_2019**

	Head Office Madrid	Gran Via Office Madrid	CA Brand Office San Francisco	Total (calculated, not estimations)
<b>Electricity consumption</b> (Base year 2018)	88,111.0	17,729.0	3,528.0*	<b>109,368 kWh /Year</b>
<b>Year 2019</b>	<b>76,262</b>	<b>52,701</b>	<b>27,392*</b>	<b>156,263 kWh /Year</b>
<b>%</b>	<b>-13.44%</b>	<b>+133.64%</b>	Not relevant/ estimated	<b>+30%</b>
<b>Kg CO2e</b> (Base year 2018)	33,482.18 CO2e	6,737.02 CO2e	1,280.00* CO2e	<b>40,219.20 kg CO2e</b>
<b>Year 2019</b>	<b>20,415.0 kg CO2e</b>	<b>14,229.27 kg CO2e</b>	<b>5,451.0 kg CO2e</b>	<b>40,095.27 kg CO2</b>

\* Estimations: Data given by the property owner. IGZ's office in San Francisco is a rented office space that occupies 150m2 of a total of 5,000 m2 office building IN 2019. This office space was firstly occupied at the end of the year 2018 representing a very energy consumption.

\*\*Office 2, Gran Via was opened at the second half of the year 2018, resulting the low power consumption of electric energy during that year compared to 2019 consumption data.

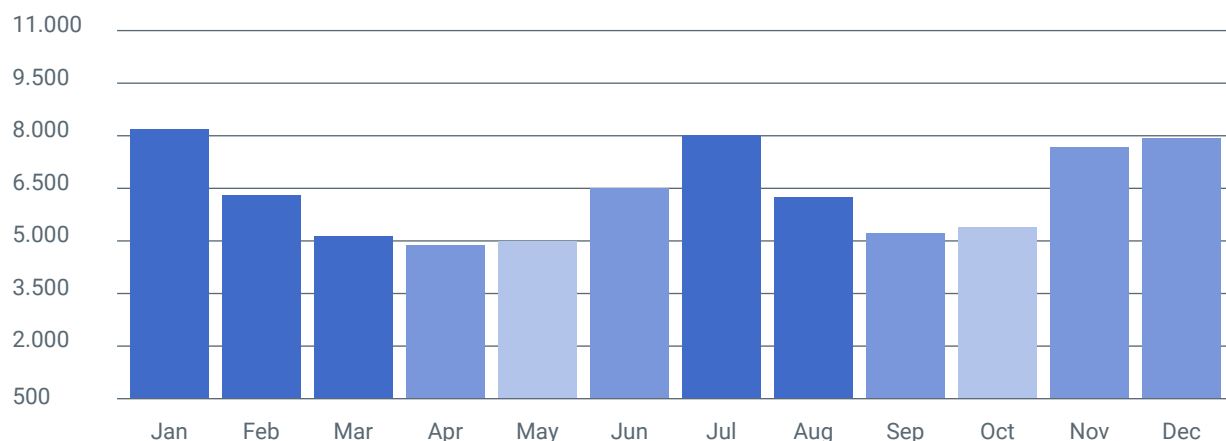
\*\*\*Head Office of Madrid was extended by 349 square meters in October 2019

Emission factors of electricity companies:

- Endesa Energia S.A.: **0,27 kgCO2e/kWh** (Electric Mix). 2019
- Emission factor of Factor Energía S.A.: **0,21 kgCO2e/kWh** (Electric Mix). 2019

Source: Spanish Ministry for Ecological Transition and Demographic Challenge

# **ELECTRICITY CONSUMPTION** (KWH/MONTH)



**TOTAL CONSUMPTION PEAK  
HOURS (KWH)**

**1 4 3 5 3**

**TOTAL ENERGY  
CONSUMPTION, KWH/YEAR**

**7 6 2 6 2**

**AVERAGE MONTHLY  
CONSUMPTION (KWH/MONTH)**

**6 3 5 5**

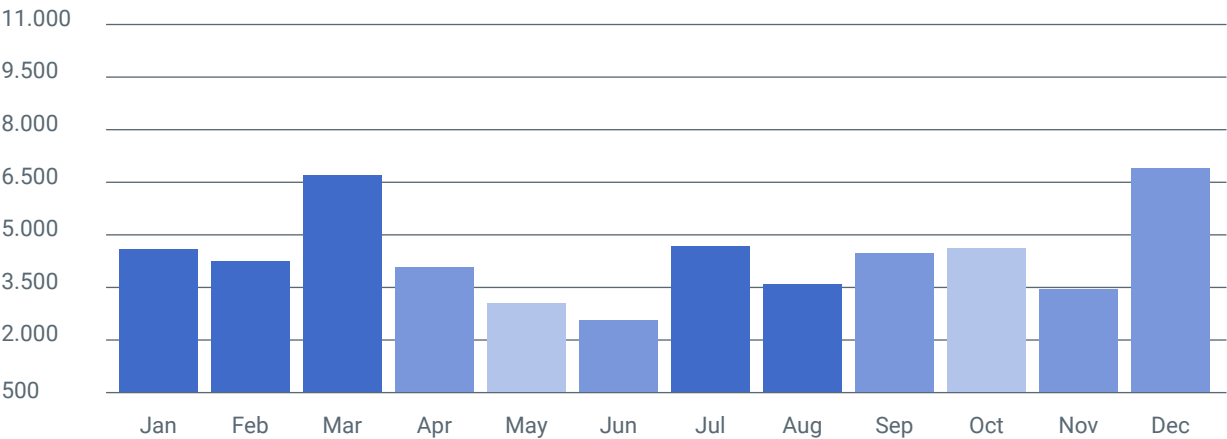
**TABLE 6: ELECTRICITY CONSUMPTION IGZ HEAD OFFICE, MADRID (2019)**

Month	Days	Peak Hours (KWH)	Valley Hours (KWH)	Moderate (KWH)	Total KWH/ Month Electricity Consumption
January	28	1406,00	4550	2230	8186
February	28	1094,00	3496	1603	6193
March	31	946,00	2983	1168	5097
April	30	1032,00	2602	1149	4783
May	31	1029,00	2768	1180	4977
June	30	1324,00	3624	1582	6530
July	31	1670,00	4373	2006	8049
August	31	1374,00	3184	1588	6146
September	30	1106,00	2916	1298	5320
October	31	1137,00	2982	1254	5519
November	30	1166,00	3645	2806	7617
December	31	1069,00	3470	-	7845
<b>Total Consumption Year 2019</b>	-	<b>14353,00</b>	<b>40593</b>	<b>21316</b>	<b>76262</b>

TABLE 7: ELECTRICITY CONSUMPTION IGZ OFFICE 2 GRAN VIA, MADRID (2019)

Month	Days	Peak Hours (KWH)	Valley Hours (KWH)	Moderate (KWH)	Total KWH/ Month Electricity Consumption
January	28	647,00	2576	1302	4525
February	28	650,00	2391	1226	4267
March	31	1118,00	3401	2285	6804
April	30	778,00	2001	1309	4088
May	31	634,00	1667	762	3063
June	30	589,00	1528	450	2567
July	31	1017,00	2704	876	4597
August	31	824,00	2072	659	3555
September	30	922,00	2338	1079	4339
October	31	972,00	2271	1265	4508
November	30	592	1938	932	3462
December	31	1002	3820	2104	6926
Total Consumption Year 2019	-	9745,00	28707	14249	52701

ELECTRICITY CONSUMPTION  
(KWH/MONTH)



TOTAL COMSUMPTION PEAK  
HOURS (KWH)

9 7 4 5

TOTAL ENERGY  
CONSUMPTION, KWH/YEAR

5 2 7 0 1

AVERAGE MONTHLY  
CONSUMPTION (KWH/MONTH)

4 3 9 1



#### OVERSEA OFFICE (SAN FRANCISCO L.A.):

The electricity consumption of IGZ at the San Francisco Office has been estimated, taking into consideration the following circumstances:

- San Francisco Office in 2019 is a rented office space located in a Work Center Building;
- We can only get an estimation of electric power consumption linked to IGZ's business activity. There is no individual electricity metering: **27,392 kWh per year**.
- An annual average of occupation of 8 people in year 2019, twice that in the previous year.

Based on these facts, the carbon footprint of San Francisco Office in year 2019, from electricity consumption, amounts to **5,45 tCO<sub>2</sub>e/kWh**. This information is only for IGZ's internal knowledge as this data will not be reflected in the total carbon footprint to be registered in the *Spanish Registry of Carbon Footprint, Offsetting and CO<sub>2</sub> Removal* (Commitment Section A).

Country specific electricity grid greenhouse gas emission factors (Grid WECC-California) have been sourced directly from the **United States Environmental Protection Agency's** (EPA) eGrid database. (Last Updated: July 2020)<sup>5</sup>:

California (CA): Grid, WECC- California:

- Generation Factor: **0.19143** (kgCO<sub>2</sub>e per kWh)
- Transport and Distribution T&D **0.0097** (kgCO<sub>2</sub>e per kWh) 2018 (published 2020).
- Emission factors, total amount: **0,199** kgCO<sub>2</sub>e per kWh

<sup>5</sup>[https://www.carbonfootprint.com/docs/2020\\_07\\_emissions\\_factors\\_sources\\_for\\_2020\\_electricity\\_v1\\_3.pdf](https://www.carbonfootprint.com/docs/2020_07_emissions_factors_sources_for_2020_electricity_v1_3.pdf)

## SCOPE 3 :

### EMISSIONS FROM EVERYTHING ELSE

GHG emissions from the supply chain, distributors and product use etc.

- Business travels
- Data Centers
- Waste disposal
- Outsourced activities
- Production of purchased materials, etc.



The most representative indirect emissions from Scope 3 studied by IGZ, continues to be mobility emissions (air business travels) as the main focus of large majority of GHG emissions generated, due to the intense overseas business generated by the company. This scope has been widened in year 2019 with:

- **The totality of domestic flights within the United States**
- **Train travels within Spain, as a cleaner transport choice face to domestic travels by plane.**

Other items such as waste disposal, data centers or water consumption, are not included, due to difficulties to obtain consistent data, although further efforts will be encouraged in subsequent reporting years to know the impact on carbon footprint and subsequently on climate change.

#### Mobility emissions:

**Air travels:** Given our role as a global provider of automation and A.I. solutions, business travels are an unavoidable part of our activity and mobility emissions have been one of the main sources of GHG emissions in 2019.

Air conversion factors from “*Conversion factor 2019. Full set*” (U.K. Government emission conversion factors for greenhouse gas company reporting, Department for Business, Energy & Industrial Strategy), have been used to report Scope 3 for individuals flying for work purposes, including Radiative forcing (RF)<sup>6</sup>, a measure of the additional environmental impact of aviation. This include emissions of nitrous oxides and water vapour when emitted at high altitude.

The impact of flying in business class has been taken into consideration and all commercial air travels have been made in “**economy class**”. The reason is that air travel factors are calculated on the basis of the area of the plane each passenger takes up. If a plane is comprised totally of business-class seats, as opposed to more closely packed economy class seats, fewer passengers can fly. Therefore, each passenger takes a larger share of the emissions.

<sup>6</sup>The term “radiative forcing” has been employed in the IPCC Assessments (Intergovernmental Panel on Climate Change) to denote an externally imposed perturbation in the radiative energy budget of the Earth’s climate system. Such a perturbation can be brought about by secular changes in the concentrations of radiatively active species (e.g., CO<sub>2</sub>, aerosols), changes in the solar irradiance incident upon the planet, or other changes that affect the radiative energy absorbed by the surface (e.g., changes in surface reflection properties). This imbalance in the radiation budget has the potential to lead to changes in climate parameters and thus result in a new equilibrium state of the climate system.

**TABLE 8: EMISSION CONVERSION FACTORS INCLUDING RADIATIVE FORCING  
(KG CO2E)\_YEAR 2019**

Activity	Haul	Class	Unit	With Radiative Forcing	
				kg CO2e	kg CO2
Flights	Domestic, to/ from Spain	Average passenger	passenger.km	0,25493	0,25355
	Short-haul, to/ from Spain	Average passenger	passenger.km	0,15832	0,15753
		Economy	passenger.km	0,15573	0,15495
		Business	passenger.km	0,2336	0,23243
	Long-haul, to/ from Spain	Average passenger	passenger.km	0,19562	0,19464
		Economy	passenger.km	0,14981	0,14906
		Premium economy	passenger.km	0,2397	0,2385
		Business	passenger.km	0,43446	0,43229
		First	passenger.km	0,59925	0,59626
	International, to/from non-Spain	Average passenger	passenger.km	0,18078	0,17987
		Economy	passenger.km	0,138445	0,13775
		Premium economy	passenger.km	0,22151	0,2204
		Business	passenger.km	0,40149	0,39948
		First	passenger.km	0,55376	0,551

Source: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019>

"Conversion factor 2019. Full set" U.K. Government emission conversion factors for greenhouse gas company reporting (Department for Business, Energy & Industrial Strategy). Last updated June 2020.

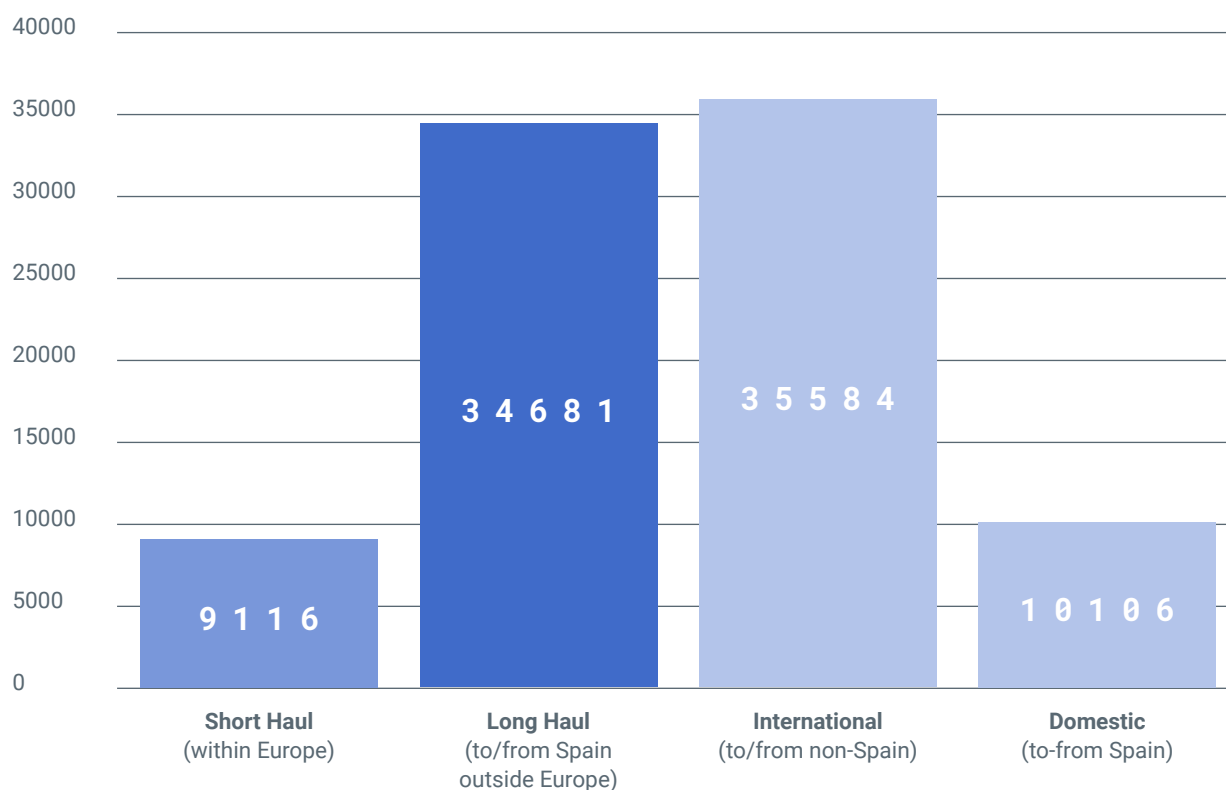
TABLE 9: SCOPE 3. MOBILITY EMISSIONS. AIR BUSINESS TRAVELS YEAR 2019

Base Year 2018	Passenger km/Year 2019	Air business travel emissions	% Air business travel emissions
Domestic flights (from/to Spain)	5,965 km	1,779 kg CO <sub>2</sub> e	4,68%
Year 2019	km	10,106 kg CO <sub>2</sub> e	11,29%
Short haul (within Europe) flights	69,762 km	10,801 kg CO <sub>2</sub> e	28,43%
Year 2019	km	9,116 kg CO <sub>2</sub> e	10,18%
Long-haul (to/from Spain outside Europe)	131,343 km	21,381 kg CO <sub>2</sub> e	56,27%
Year 2019	km	34,681 kg CO <sub>2</sub> e	38,75%
International flights (to/from not Spain)	28,816 km	4,033 kg CO <sub>2</sub> e	10,61%
Year 2019	km	35,584 kg CO <sub>2</sub> e	39,76%
Total 2018 (Base year)	235,886 km	37,995 kg CO <sub>2</sub> e	100%
Total 2019	590,267 km	89,488 kg CO <sub>2</sub> e	100%



WE INTEND TO MINIMIZE EMISSIONS BY ENCOURAGING EMPLOYEES TO TAKE LESS TRIPS, INSTEAD USING TELECONFERENCING AND VIDEO CONFERENCING

#### TOTAL KGCO2E PER TYPE OF AIR TRAVEL (YEAR 2019).



Mobility emissions (flights) accounted for **89,488 kgCO2e**, in year 2019, which represents the majority of the CO2e emissions analyzed.

IGZ intends to minimize emissions with alternative to travels, including teleconferencing and videoconferencing, which are prioritized whenever compatible with business activities, client's location and interests. Staff are also encouraged to use sustainable means of transport in their daily commute and more polluting ones like train instead air travel for domestic flights (within Spain).

**TABLE 10: TOTAL KMS PER TYPE OF AIR TRAVEL (YEAR 2019).**

Haul	Total CO2e per travel (kg CO2e) 2019	%	Total kms
Short haul (within Europe)	9116	10,19	58536
Long-haul to-from Spain (outside of Europe)	34681	38,76	231502
International (to/from non-Spain)	35584	39,76	260593
Domestic to-from Spain	10106	11,29	39636
<b>Total CO2 emissions</b>	<b>89488</b>	<b>100</b>	<b>590267</b>

**TABLE 11: INFORMATION ON AIR BUSINESS TRAVELS, YEAR 2019**

Type	From	To	Flight Company	Passenger.km	month	Class	Haul	total CO2e per travel (kg CO2e)
Return	Madrid (MAD)	New York (JFK)	Iberia	11524	Jan	economy class	Long-haul to-from Spain (outside of Europe)	1726
Return	Madrid (MAD)	New York (JFK)	Iberia	11524	Jan	economy class	Long-haul to-from Spain (outside of Europe)	1726
Return	Madrid (MAD)	Bruselas (BRU)	Iberia	2632	Jan	economy class	Short haul (whitin Europe)	410
Return	Madrid (MAD)	Bruselas (BRU)	Iberia	2632	Jan	economy class	Short haul (whitin Europe)	410
Return	Madrid (MAD)	Bruselas (BRU)	Iberia	2632	Jan	economy class	Short haul (whitin Europe)	410
Return	Madrid (MAD)	Bruselas (BRU)	Iberia	2632	Jan	economy class	Short haul (whitin Europe)	410
Return	Madrid (MAD)	Bruselas (BRU)	Iberia	2632	Jan	economy class	Short haul (whitin Europe)	410
Return	Madrid (MAD)	Bruselas (BRU)	Iberia	2632	Jan	economy class	Short haul (whitin Europe)	410
Return	Madrid (MAD)	Bruselas (BRU)	Iberia	2632	Jan	economy class	Short haul (whitin Europe)	410
Return	Madrid (MAD)	Barcelona (BCN)	Iberia	966	Feb	economy class	Domestic to-from Spain	246
Return	Madrid (MAD)	Barcelona (BCN)	Iberia	966	Feb	economy class	Domestic to-from Spain	246
Return	Newcastle upon Tyne (NCL)	Amsterdam (AMS)	KLM	1044	May	economy class	Short haul (whitin Europe)	163
Return	Madrid - Frankfurt am Main / Frankfurt am Main - Wrocław / Wrocław - Munich / Munich - Madrid MAD - FRA / FRA - WRO / WRO - MUC / MUC - MAD	Wrocław (WRO)	Lufthansa	4008	Jun	economy class	Short haul (whitin Europe)	624
Return	Madrid - Frankfurt am Main / Frankfurt am Main - Wrocław / Wrocław - Munich / Munich - Madrid MAD - FRA / FRA - WRO / WRO - MUC / MUC - MAD	Wrocław (WRO)	Lufthansa	4008	Jun	economy class	Short haul (whitin Europe)	624
Single	Praga (PRG)	Madrid (MAD)	Otras	1759	Jun	economy class	Short haul (whitin Europe)	274
Single	Praga (PRG)	Madrid (MAD)	Otras	1759	Jun	economy class	Short haul (whitin Europe)	274
Single	Madrid (MAD)	Praga (PRG)	Iberia	1759	Jun	economy class	Short haul (whitin Europe)	274
Single	Madrid (MAD)	Praga (PRG)	Iberia	1759	Jun	economy class	Short haul (whitin Europe)	274
Single	Madrid (MAD)	Praga (PRG)	Iberia	1759	Jun	economy class	Short haul (whitin Europe)	274
Return	Praga (PRG)-Bruselas (BRU)	Bruselas (BRU)- Madrid (MAD)	Otras	2025	Jun	economy class	Short haul (whitin Europe)	315
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Jun	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Oct	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Oct	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Oct	economy class	Domestic to-from Spain	261

**TABLE 11: INFORMATION ON AIR BUSINESS TRAVELS, YEAR 2019**

**CONTINUED**

Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Oct	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Oct	economy class	Domestic to-from Spain	261
Single	Madrid (MAD)	A Coruña (LCG)	Iberia	512	Oct	economy class	Domestic to-from Spain	131
Single	A Coruña (LCG)	Madrid (MAD)	Air Europa	512	Oct	economy class	Domestic to-from Spain	131
Return	Madrid (MAD)	Las Palmas de Gran Canaria (LPA)	Iberia	3538	Oct	economy class	Domestic to-from Spain	902
Return	Madrid (MAD)	Las Palmas de Gran Canaria (LPA)	Iberia	3538	Oct	economy class	Domestic to-from Spain	902
Return	Madrid (MAD)	Las Palmas de Gran Canaria (LPA)	Iberia	3538	Oct	economy class	Domestic to-from Spain	902
Return	Madrid (MAD)	Las Palmas de Gran Canaria (LPA)	Iberia	3538	Oct	economy class	Domestic to-from Spain	902
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	Londres (LGW)	Iberia	2432	Nov	economy class	Short haul (whitin Europe)	379
Return	Madrid (MAD)	Londres (LGW)	Iberia	2432	Nov	economy class	Short haul (whitin Europe)	379
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	Paris (ORY)	Air Europa	2060	Nov	economy class	Short haul (whitin Europe)	321
Return	Madrid (MAD)	Paris (ORY)	Air Europa	2060	Nov	economy class	Short haul (whitin Europe)	321
Return	Madrid (MAD)	Paris (ORY)	Air Europa	2060	Nov	economy class	Short haul (whitin Europe)	321
Return	Madrid (MAD)	Paris (ORY)	Air Europa	2060	Nov	economy class	Short haul (whitin Europe)	321
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	A Coruña (LCG)	Iberia	1024	Nov	economy class	Domestic to-from Spain	261
Return	Madrid (MAD)	San Francisco (SFO)	Iberia	18666	Sep	economy class	Long-haul to-from Spain (outside of Europe)	2796
Return	Madrid (MAD)	San Francisco (SFO)	Iberia	18666	Sep	economy class	Long-haul to-from Spain (outside of Europe)	2796

**TABLE 11: INFORMATION ON AIR BUSINESS TRAVELS, YEAR 2019**

**CONTINUED**

Return	Madrid (MAD)	New York (JFK)	Iberia	11524	Sep	economy class	Long-haul to-from Spain (outside of Europe)	1726
Return	Madrid (MAD)	Manchester	Iberia	2870	Sep	economy class	Short haul (whitin Europe)	447
Return	Madrid (MAD)	San Francisco (SFO)	Iberia	18666	Sep	economy class	Long-haul to-from Spain (outside of Europe)	2796
Single	Chicago, Illinois (O'Hare): ORD	Madrid (MAD)	Iberia	6745	Oct	economy class	Long-haul to-from Spain (outside of Europe)	1010
Single	Madrid (MAD)	London	Iberia	1216	Oct	economy class	Short haul (whitin Europe)	189
Single	Madrid (MAD)	London	Iberia	1216	Oct	economy class	Short haul (whitin Europe)	189
Single	Madrid (MAD)	La Coruña	Iberia	512	Jan	economy class	Domestic to-from Spain	131
Single	Madrid (MAD)	La Coruña	Iberia	512	Jan	economy class	Domestic to-from Spain	131
Single	La Coruña	Madrid (MAD)	Iberia	512	Jan	economy class	Domestic to-from Spain	131
Single	La Coruña	Madrid (MAD)	Iberia	512	Jan	economy class	Domestic to-from Spain	131
Return	Madrid (MAD)	La Coruña	Iberia	1024	Jan	economy class	Domestic to-from Spain	262
Return	San Francisco (SFO)	New York (JFK)	American Airlines	8304	Feb	economy class	International (to/from non-Spain)	1150
Return	San Francisco (SFO)	Miami (MIA)	American Airlines	8308	Mar	economy class	International (to/from non-Spain)	1150
Single	Chicago, Illinois (O'Hare): ORD	Madrid (MAD)	American Airlines	6745	Mar	economy class	International (to/from non-Spain)	1010
Single	Madrid (MAD)	Dallas fort Worth (DFW)	American Airlines	7963	Apr	economy class	Long-haul to-from Spain (outside of Europe)	1193
Single	Dallas Fort Worth (DFW)	San Francisco (SFO)	American Airlines	2379	Apr	economy class	International (to/from non-Spain)	329
Single	Miami (MIA)	Orlando (MCO) Florida	Otras	312	Apr	economy class	International (to/from non-Spain)	43
Single	Tampa (TPA)	San Francisco (SFO)	Otras	3844	Jan	economy class	International (to/from non-Spain)	532
Single	For Lauder Dale (FLL) Florida	Tampa (TPA) Florida	Otras	315	Jan	economy class	International (to/from non-Spain)	44
Single	San Francisco (SFO)	Miami (MIA)	Otras	4152	Jan	economy class	International (to/from non-Spain)	575
Single	San Francisco (SFO)	(Newark (EWR) New Jersey	Otras	4119	Jan	economy class	International (to/from non-Spain)	570
Return	San Francisco (SFO)	(Newark (EWR) New Jersey	Otras	8238	Jan	economy class	International (to/from non-Spain)	570
Return	San Francisco (SFO)	New York (JFK)	American Airlines	8304	Jan	economy class	International (to/from non-Spain)	1150
Single	San Francisco (SFO)	New York (JFK)	American Airlines	12456	Jan	economy class	International (to/from non-Spain)	1724
Single	New York (JFK)	San Francisco (SFO)	American Airlines	4152	Jan	economy class	International (to/from non-Spain)	575
Single	Orlando (MCO) Florida	Phoenix (PHX) Arizona	American Airlines	2968	Jan	economy class	International (to/from non-Spain)	411
Single	Phoenix (PHX)	San Jose (SJC) CA	American Airlines	2985	Jan	economy class	International (to/from non-Spain)	413
Single	San Francisco (SFO)	Miami (MIA)	American Airlines	4154	Jan	economy class	International (to/from non-Spain)	575
Return	Newcastle upon Tyne (NCL)	London (LON)	British Airways	810	May	economy class	International (to/from non-Spain)	112



**TABLE 11: INFORMATION ON AIR BUSINESS TRAVELS, YEAR 2019**

**CONTINUED**

Single	Madrid (MAD)	San Francisco (SFO)	British Airways	9333	Apr	economy class	Long-haul to-from Spain (outside of Europe)	1398
Single	San Francisco (SFO)	Dallas fort Worth (DFW)	British Airways	2379	Jun	economy class	International (to/from non-Spain)	329
Single	Dallas Fort Worth	Madrid (MAD)	British Airways	7963	Jun	economy class	Long-haul to-from Spain (outside of Europe)	1193
Return	Madrid (MAD)	New York (JFK)	Iberia	34572	Sep	economy class	Long-haul to-from Spain (outside of Europe)	5179
Return	San Francisco (SFO)	Dallas fort Worth (FDW)	American Airlines	9516	Apr	economy class	International (to/from non-Spain)	1317
Return	Dallas fort Worth (DFW) Texas	Knoxville (TYS) Tennessee	American Airlines	4924	Apr	economy class	International (to/from non-Spain)	682
Single	Madrid (MAD)	Londres (LGW)	American Airlines	2432	Mar	economy class	Short haul (whitin Europe)	379
Single	Londres (LON)	San Francisco (SFO)	American Airlines	17234	Mar	economy class	International (to/from non-Spain)	2386
Single	San Francisco (SFO)	Madrid (MAD)	American Airlines	18666	Apr	economy class	Long-haul to-from Spain (outside of Europe)	2796
Single	San Francisco (SFO)	New York (JFK)	British Airways	4152	May	economy class	International (to/from non-Spain)	575
Single	New York (JFK)	London (LON)	British Airways	5541	May	economy class	International (to/from non-Spain)	767
Return	London (LON)	Newcastle upon Tyne (NCL)	British Airways	810	May	economy class	Short haul (whitin Europe)	126
Single	London (LON)	San Jose (SJC) CA	British Airways	8619	May	economy class	International (to/from non-Spain)	1193
Single	San Francisco (SFO)	miami (MIA)	American Airlines	4154	Jul	economy class	International (to/from non-Spain)	575
Single	Miami (MIA)	Phoenix (PHX)	American Airlines	3170	Jul	economy class	International (to/from non-Spain)	439
Single	Phoenix (PHX)	San Jose (SJC)	American Airlines	1990	Jul	economy class	International (to/from non-Spain)	276
Return	Madrid (MAD)	San Francisco (SFO)	Iberia	18666	Jul	economy class	Long-haul to-from Spain (outside of Europe)	2796
Single	San Francisco (SFO)	O'Hare International Chicago Illinois (ORD)	American Airlines	2965	Sep	economy class	International (to/from non-Spain)	410
Single	O'Hare International Chicago (ORD)	Madrid (MAD)	Iberia	6745	Sep	economy class	International (to/from non-Spain)	934
Single	Madrid (MAD)	New York (JFK)	Iberia	5762	Sep	economy class	International (to/from non-Spain)	798
Single	New York (JFK)	San Francisco (SFO)	Iberia	4152	Sep	economy class	International (to/from non-Spain)	575
Single	Madrid (MAD)	London	American Airlines	2432	Mar	economy class	International (to/from non-Spain)	337
Single	London (LON)	San Francisco (SFO)	American Airlines	17234	Mar	economy class	International (to/from non-Spain)	2386
Single	San Francisco (SFO)	Madrid (MAD)	American Airlines	18666	Mar	economy class	Long-haul to-from Spain (outside of Europe)	2796
Return	San Francisco (SFO)	Dallas fort Worth (DFW)	American Airlines	4758	Mar	economy class	International (to/from non-Spain)	659
single	Dallas Fort (DFW)	Madrid (MAD)	American Airlines	7963	Mar	economy class	Long-haul to-from Spain (outside of Europe)	1193
Return	San Francisco (SFO) CA	New York (JFK)	American Airlines	8304	Apr	economy class	International (to/from non-Spain)	1150
Return	San Jose (SJC) CA	Londres (LGW)	British Airways	17238	Sep	economy class	International (to/from non-Spain)	2387

**TABLE 11: INFORMATION ON AIR BUSINESS TRAVELS, YEAR 2019**

**CONTINUED**

Return	Londres (KGW)	Madrid (MAD)	British Airways	2432	Sep	economy class	Long-haul to-from Spain (outside of Europe)	364
Return	San Francisco (SFO)	New York (JFK)	American Airlines	8304	Aug	economy class	International (to/from non-Spain)	1150
Single	San Jose (SJC)	Londres (LGW)	British Airways	8619	Feb	economy class	International (to/from non-Spain)	1193
Single	Londres (KGW)	Madrid (MAD)	British Airways	1216	Feb	economy class	Short haul (whitin Europe)	189
Single	Madrid (MAD)	Dallas fort Worth (DFW)	British Airways	7963	Mar	economy class	Long-haul to-from Spain (outside of Europe)	1193
Single	Dallas fort Worth (DFW) Texas	San Jose (SJC) CA	British Airways	2336	Mar	economy class	International (to/from non-Spain)	323
Single	New York (JFK)	San Francisco (SFO)	American Airlines	4152	Jul	economy class	International (to/from non-Spain)	575
Return	Oakland (OAK) California	Las Vegas (LAS) Nevada	Otras	2608	May	economy class	International (to/from non-Spain)	361
Single	San Francisco (SFO)	New York (JFK)	American Airlines	12456	Jul	economy class	International (to/from non-Spain)	1724
Single	New York (JFK)	San Francisco (SFO)	American Airlines	8304	Jul	economy class	International (to/from non-Spain)	1150
<b>Total</b>				<b>590267</b>				<b>89488</b>

## TRAIN TRAVELS

For year 2019, our carbon footprint of domestic train travels has been included for the first time. IGZ tries to promote, when possible, train travels within Spain as Renfe's services have significantly lower unit emissions (per passenger or tonne-km transported) than its competitors, which are oil-dependent means of transport. In 2017, for each transport unit, Renfe's carbon footprint was reduced by 47% compared to that of 1990, the Kyoto Protocol's base year. The carbon footprint per unit transported by Renfe (**24.55 gr of CO2 km.passenger**) is five times lower than the emissions limit for so-called "green" cars, which are exempt from registration tax (120 grCO2 per km).

IGZ's carbon footprint has been calculated according to emissions factors offered by RENFE, the national railway company, having as result a total of **437.19 kg CO2**:

**TABLE 12: TRAIN TRAVELS, IGZ 12019**

Number	Date	Origin	Destination	Type	Distance km	kgCO2/passenger. km
1	12/9/19	Madrid	Cordoba	Return	592	14,53
2	12/9/19	Madrid	Cordoba	Return	592	14,53
3	12/9/19	Madrid	Cordoba	Return	592	14,53
4	12/9/19	Madrid	Cordoba	Return	592	14,53
5	3/10/19	Madrid	Alicante	Return	718	17,63
6	3/10/19	Madrid	Alicante	Return	718	17,63
7	3/10/19	Madrid	Alicante	Return	718	17,63
8	3/10/19	Madrid	Alicante	Return	718	17,63
9	3/10/19	Madrid	Alicante	Return	718	17,63
10	3/10/19	Madrid	Alicante	Return	718	17,63
11	11/10/19	Madrid	Barcelona	Return	1012	24,84
12	11/10/19	Madrid	Barcelona	Return	1012	24,84
13	11/4/19	Madrid	Barcelona	Return	1012	24,84
14	11/6/19	Madrid	Barcelona	Return	1012	24,84
15	31/1/19	Madrid	Barcelona	Return	1012	24,84
16	31/1/19	Madrid	Barcelona	Return	1012	24,84
17	11/6/19	Madrid	Barcelona	Return	1012	24,84
18	31/1/19	Madrid	Barcelona	Return	1012	24,84
19	16/12/19	Madrid	Barcelona	Return	1012	24,84
20	16/12/19	Madrid	Barcelona	Return	1012	24,84
21	16/12/19	Madrid	Barcelona	Single	506	12,42
22	17/12/19	Barcelona	Madrid	Single	506	12,42
<b>Total</b>					<b>17808</b>	<b>437,19</b>

Source: RENFE, Informe Anual de Responsabilidad Social, Empresarial y Gobierno Corporativo. Pag.69

# REDUCTION AND COMPENSATION MEASURES

Intelygenz approved a “Carbon Footprint’s Plan 2018-2020” to reduce and/or compensate CO<sub>2</sub>e emissions generated by daily activity. The following proposals were agreed by the Company:

## A. GUARANTEES OF ORIGIN 100% RENEWABLE

Renewable energy producers can apply to the National Commission on Markets and Competition (CNMC in Spanish) for a certificate of the energy generated. These certificates show that kWh are generated from renewable energy sources. There are also Guarantees of Origin for high efficiency cogeneration. These certificates can be transferred to electricity retail companies so that they can justify to their customers the renewable origin of the energy supplied.

<b>Scope 2</b>	CO <sub>2</sub> e indirect emissions from electricity energy consumption
<b>Target</b>	Eliminate CO <sub>2</sub> e emissions from Head Office in Madrid
<b>Measure</b>	Change current electricity retail company by one with guarantees of origin 100% renewable (Holaluz, Ecovattis, etc.).
<b>Reduction achieved of CO<sub>2</sub>e emissions</b>	51.41% of total IGZ’s CO <sub>2</sub> e emissions from Head Office
<b>Year of application</b>	2020

This target has been achieved in July 2020 and not only for the Head Office but also for office 2, both of them in Madrid. The new electricity retail company, Endesa Energía, S.A.U., is 100% renewable electricity retailer supplying electric power with guarantee of renewable origin, certified by Spain’s Competition Authority (CNMC).

## B. OFFSETTING AND COMPENSATING IGZ'S CARBON FOOTPRINT THROUGH HIGH QUALITY, CERTIFIED MECHANISMS

Carbon offset schemes allow individuals and companies to invest in environmental projects around the world in order to balance out their own carbon footprints. A Carbon offset is a way to compensate CO<sub>2</sub>e emissions generated, by funding an equivalent carbon dioxide saving elsewhere, to offset the entire carbon footprint or neutralize the impact of a specific activity. The projects are usually based in developing countries and many of them also provide wider benefits in addition to carbon reduction, such as biodiversity, health, education, food security or jobs.

Carbon offsetting is used to balance out these emissions by helping with financial support for emission savings in other parts of the world.

These carbon offset projects are subject to international standards, such as the Verified Carbon Standard (VCS), Gold Standard Voluntary Emission Reductions (VER) and Certified Emission Reductions (CER).

Scope 1, 2, 3	All CO <sub>2</sub> e direct and/or indirect emissions
Target	Compensate all CO <sub>2</sub> e emissions for year 2018
Measure	Offset the IGZ's Carbon footprint by giving financial support to a carbon offsetting project available on websites of QAS (Quality Assurance Standard) approved organizations.
Reduction achieved of CO <sub>2</sub> e emissions	All of Intelygenz's CO <sub>2</sub> emissions or the impact of a specific activity
Year of application	2019

IGZ's carbon footprint calculated for year 2018 was 100% compensated, by supporting the "Cook Stove Project 1, Nkhata Bay District, Malawi" registered at the United Nations Offsetting Platform. Validation Report of the project performed by TÜV Sud.



United Nations  
Framework Convention on  
Climate Change

DATE: 21 JUNE 2019  
REFERENCE: VC9033\_2/2019

**VOLUNTARY  
CANCELLATION  
CERTIFICATE**

**Presented to**  
ESA83479063 Desarrollos Informaticos Intelygenz S.A.

**Reason for cancellation**  
I am offsetting greenhouse gas emissions for my company, supporting the Improved Cook Stove Project 1, Nkhata Bay District, Malawi (9933).



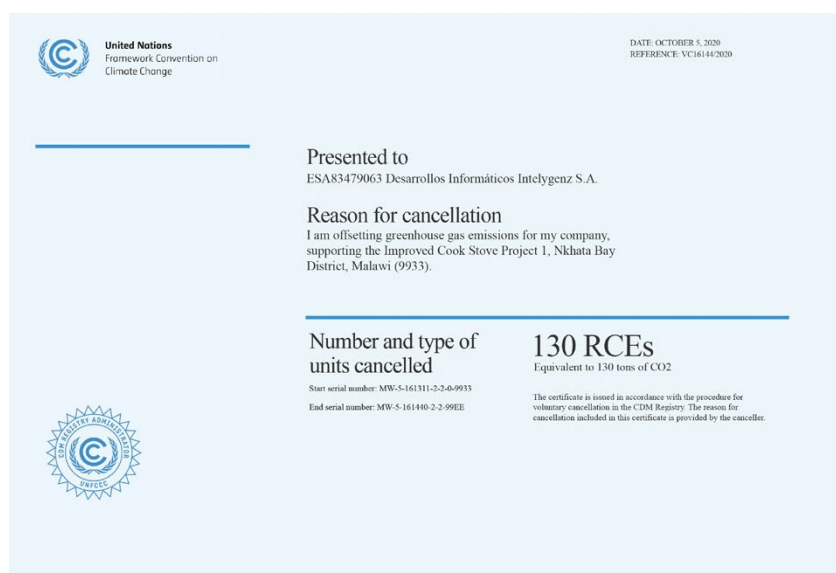
**Number and type  
of units cancelled**

98 CERs  
Equivalent to 98 tons of CO<sub>2</sub>

Start serial number: MW-5-149501-2-2-0-9933  
End serial number: MW-5-149598-2-2-0-9933

The certificate is issued in accordance with the procedure for voluntary cancellation in the CDM Registry. The reason for cancellation included in this certificate is provided by the canceller.

In 2019, IGZ offset its carbon footprint by 100%, maintaining the support for the “Cook Stove Project 1, Nkhata Bay District, Malawi” as the previous year, which is registered at the United Nations Platform. Validation Report of the project performed by TÜV Sud.



### C. REPLACEMENT OF OBSOLETE CLIMATIZATION UNITS IN HEAD OFFICE (MADRID)

Air conditioning and refrigeration equipment have utilized for years various Ozone Depleting Substances (ODSs), primarily chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). These ODSs are being phased out of manufacture and use by EU legislation, the Montreal Protocol and the US Clean Air Act Amendments of 1990 (Title VI), in the United States (e.g.: R22 hydrochlorofluorocarbon (HCFC) has been phased out from air conditioning systems since 1st January 2015, by the EC Ozone Regulation (No. 1005/2009). All R22, including recycled and reclaimed refrigerant, are now banned for use in maintenance and repairs. Hydrofluorocarbons (HFCs) and, to a lesser extent, perfluorocarbons (PFCs) are used as substitutes for the regulated ODSs.

<b>Scope 1</b>	Direct emissions
<b>Target</b>	Replacement of 6 air-conditioning splits units containing R22
<b>Measure</b>	Formally request to the owner of the building, to replace 6 air-conditioning splits units containing R22, as this equipment can no longer be maintained/ recharged with R22.
<b>Reduction achieved of CO2e emissions</b>	0,00 kgCO2e
<b>Year of application</b>	2020

Achievements during year 2019: Ahead of the deadline set in 2020 to achieve the implementation of this measure, during the year 2019, 3 of these 6 air-conditioning units (2 CARRIER units and 1 ROCA unit, containing R22 have been replaced).

#### D. EXTENDED REPORTING SCOPE TO INCLUDE ADDITIONAL SCOPE 3 EMISSIONS SOURCES

We have calculated our carbon footprint for the first time in 2019 (Base year 2018) and are fully committed to concentrating our efforts on improving, step by step, the knowledge of direct and indirect emissions we generate to reduce, minimize and to compensate them.

<b>Scope 1, 2, 3</b>	Direct and indirect emissions
<b>Target</b>	Improving the knowledge of the total IGZ's carbon footprint
<b>Measure</b>	Extend the knowledge of the carbon footprint to other activities such as mobility (other means of transport), real data of energy consumption in San Francisco (CA) Office, water and paper consumption, etc.
<b>Reduction achieved of CO2e emissions</b>	0,00 kgCO2e
<b>Year of application</b>	2020

Achievements during year 2019: Scope 3 has been widened in 2019 with all domestic flights within the territory of the United States and train travels in Spain.

#### E. DONATION OF OBSOLETE ICT EQUIPMENT TO CHARITABLE ORGANIZATIONS

An annual donation is currently conducted by IGZ to Borax Distribución Informática Usada S.L.

#### F. IMPLEMENTATION OF ACTIVE LIGHT MANAGEMENT SYSTEMS:

<b>Scope 2</b>	Indirect emissions
<b>Target</b>	Reduce IGZ's carbon footprint from electricity consumption
<b>Measure</b>	Implementation of active light managements systems in Head Office (Madrid)
<b>Reduction achieved of CO2e emissions</b>	A reduction of 5-8% of energy consumption is foreseen
<b>Year of application</b>	2020

## ANNEX I:

# CUBO VERDE COMPANY PROFILE

Cubo Verde ([www.elcuboverde.com](http://www.elcuboverde.com)) is a consultancy firm with broad experience in climate change, energy and climate funding. We aim to be generators and facilitators of initiatives, projects and innovative and sustainable solutions, identifying for our clients the best options and providing individual or synergistic solutions.

Climate change mitigation and adaptation needs a “toolbox” that enables us to know, prevent and reduce our activity impacts and deal with the challenges associated with climate change: climate modelling projections, risk analysis and environmental vulnerability, climate change indicators, Carbon Footprint, GHG emission inventories, etc.

We bring knowledge of emerging climate services to our public and private customers, identifying opportunities and tools to better understand climate risks and potential impacts for their assets and activities. Through the use of these new climate tools and methodologies, we enhance them to re-design their business essence to gain resilience in the decision-making process.

El Cubo Verde has been awarded with the *First Prize Winner in the “Mitigation”* Category on Climate Change. Climate Champion Awards, Europe’s Green Business Network, November 2015.

### We have a wide experience in developing:

- Climate Change strategies (adaptation and mitigation)
- Environmental vulnerability reports
- Climate funding
- Public & private climate consortium
- Developing of GHG emission inventories
- Environmental indicators
- Mitigation sectoral diagnosis (industry, agriculture, food, waste, transport, energy production, fishing, housing)
- Carbon Footprint
- Energy saving plans
- Calculation of the carbon sequestration potential of forest
- Sound management of chemicals (SMOC)
- Emissions measurement campaigns, etc.





## ANNEX II:

# CERTIFICATION OF CARBON OFFSET PROJECT FUNDED BY IGZ FOR YEAR 2019



United Nations  
Framework Convention on  
Climate Change

DATE: OCTOBER 5, 2020  
REFERENCE: VC16144/2020

### Presented to

ESA83479063 Desarrollos Informáticos Intelygenz S.A.

### Reason for cancellation

I am offsetting greenhouse gas emissions for my company, supporting the Improved Cook Stove Project 1, Nkhata Bay District, Malawi (9933).

### Number and type of units cancelled

Start serial number: MW-5-161311-2-2-0-9933

End serial number: MW-5-161440-2-2-99EE

## 130 RCEs

Equivalent to 130 tons of CO<sub>2</sub>

The certificate is issued in accordance with the procedure for voluntary cancellation in the CDM Registry. The reason for cancellation included in this certificate is provided by the canceller.





#### SAN FRANCISCO

+1(415) 917-1500  
541 Jefferson Ave  
Suite 100 Redwood City  
CA, 94063  
[info@intelygenz.com](mailto:info@intelygenz.com)

#### MADRID

+34 915 35 96 12  
Plaza Sta. M<sup>a</sup> Soledad Torres Acosta 2  
5<sup>o</sup>C Madrid  
28005  
[info@intelygenz.com](mailto:info@intelygenz.com)

+34 915 35 96 12  
Calle Gran Vía 30  
4<sup>o</sup>B Madrid  
28013  
[info@intelygenz.com](mailto:info@intelygenz.com)