



**DOMINO**  
PLAY THE ENERGY SAVING GAME

## **D2.2 Data Management Plan**





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<input type="checkbox"/>	CO	Confidential, only for members of the consortium (including the European Commission Services)

### Versioning and Contribution History

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## Management Summary

- The DOMINO project is a research project with the goal to encourage people to save energy at home and to manifest positive behaviour changes in the long run.
- The project is run by a consortium consisting of 6 European partners (cf. <https://www.dominoenergy.eu/en/project> to for details).
- The DOMINO Challenge target group consists of men and women, who are approximately 28-49 years old, tech savvy and own a smartphone and are living in the areas of Berlin (Germany), Brussels (Belgium) and Naples (Italy).
- The DOMINO web portal is the unique entry point into the challenge.
- All potential participants are informed online and offline about the DOMINO Challenge, its purpose, and its risks.
- Participation in the DOMINO Challenge is voluntary and can be ended by the participants at any time without consequences.
- As a requirement to participation, some Personal Data (contact data) has to be collected of the potential participant at the place to register and log in.
- Other Personal Data will be collected through the app and is not mandatory for participation, but recommended to provide to facilitate scientific analysis.
- A digital consent form on the website with detailed information of the challenge needs to be read and confirmed by the participants by ticking the box before they can finish their log in.
- The consent form will be available in German, French, Dutch and Italian so that participants in the three regions will be able to fully understand it.
- The Personal Data that is required for participation in the challenge will be collected only after specific approval by the potential participant.
- Logistics (shipping of the sets to first participants) will be an outsourced activity and Personal Data will not in any way be connected to specific set IDs of the smart plug equipment.



- Usage Data of all participants is collected at the DOMINO back-end for further analysis and to fulfil the competitive elements of the challenge.
- The Plugwise ZigBee network, gateway and plugs are highly reliable and secure, due to the use of a 128.bit AES encryption.
- The Personal Data and the Usage Data will not be coupled in any automated system or storage. An agreement to that effect is attached in chapter 7.
- All (anonymous) Usage Data collected throughout the challenge as well as Usage data resulting from the subsequent analysis will be made publicly available through an open access area on the DOMINO website.



## 1 Introduction

DOMINO is an EU-funded research project that intends to prompt energy reductions in households. It uses a smart plug technology to raise awareness for energy consumption and to change the participants' behaviour towards energy saving. The project has chosen a playful approach in form of an energy saving game called "DOMINO Challenge" which is played in teams of five households each. The challenge takes place in Brussels, Berlin, and Naples and will involve around 4000 households. Including preparation and evaluation the project extends over a period of almost three years (March 2016 till February 2019 approximately). The project results will allow making assumptions on the overall potential of smart plugs for reducing energy consumption in households and will enable related initiatives to benefit from the DOMINO experience.

This Data Management Plan describes the fundamentals of the data management concerning the DOMINO Challenge as executed by Plugwise and its DOMINO Challenge partners. The plan consists of various generally applicable Plugwise privacy and security policies and refers also to the specific DOMINO Challenge policies. Within the DOMINO project, Plugwise has been assigned to develop and deliver:

- Project database
- DOMINO website
- DOMINO App
- Smart plugs
- Testing of the equipment and software
- Logistic activities

For a better understanding of the course of the DOMINO Challenge, the course of the action can be found below:

- Potential participants from Brussels, Berlin and Naples learn about the challenge and become interested in participating.
- They sign up via the DOMINO website individually. They receive six smart plugs and a "gateway" by postal mail from Plugwise. (The gateway is the Plugwise router called "Stretch", that allows for communication with the plugs (ZigBee protocol) and the app via the existing home router by WiFi.)
- They download the DOMINO app.
- They install the plugs in their home by plugging them into a power outlet and then plugging in an electric appliance, e.g. a refrigerator or a washing machine.
- They monitor their appliances' electricity consumption for one month via the app.
- In month two and three, they receive energy saving recommendations via the app for their choice of appliances. They can compare their consumption data to

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anonymised data of other users via the website. They can comment on how useful the recommendations are.

- If they have not assembled a complete team (of 5 players) at the beginning, they can find another player during their 3-month-cycle and hand over the plugs to this person.
- The process starts over until a team of 5 people has played.
- Once all team members have played (anticipated date September 2018), the Usage Data will be evaluated and the winners will be determined.
- The last person of a team sends the plugs back to the consortium partners with help of postage labels which will be available on the DOMINO website.

In the data management plan, it is differentiated between Personal Data and Usage Data. Usage Data is collected through the stretch and stored in one cloud (called “Plugwise cloud”). Personal Data is collected through the website and through the app and is stored in a different cloud called “DOMINO cloud”.

Personal data collected through the website include:

- First Name, Name
- Physical address incl. street number, street name city, zip code and country (used for shipment of smart plug equipment)
- Email address

Address data is collected to ship the hardware to the players of the game. The email address is used to send them information on their energy savings and important procedural steps in the DOMINO Challenge.

Additional Personal Data collected through the app, include:

- Age (recommended but optional)
- Gender (recommended but optional)
- Password
- Choice of language
- Name and type of device connected for all the plugs except the joker plug (recommended but optional)
- Number of people in the household of the player (recommended but optional)
- Electricity price (recommended but optional)
- Electricity consumption from the past year (recommended but optional)
- Information on appliances: i.e. energy efficiency class, year of construction and consumption as indicated by the manufacturer (recommended but optional)
- Absence periods during the DOMINO challenge - retrospectively (recommended but optional)



This type of data is collected for research purposes that are non-commercial and serve the goal of increasing the general knowledge on electricity consumption in European households which – ultimately – can inform activities on reducing electricity consumption.

Usage data include:

- current and historical consumption on
  - Monthly basis
  - Weekly basis
  - Daily basis
  - Hourly basis
- settings and scheduling data

This type of data is collected both for research purposes that are non-commercial and for the participants so that they get well-structured insights into their own consumption patterns.

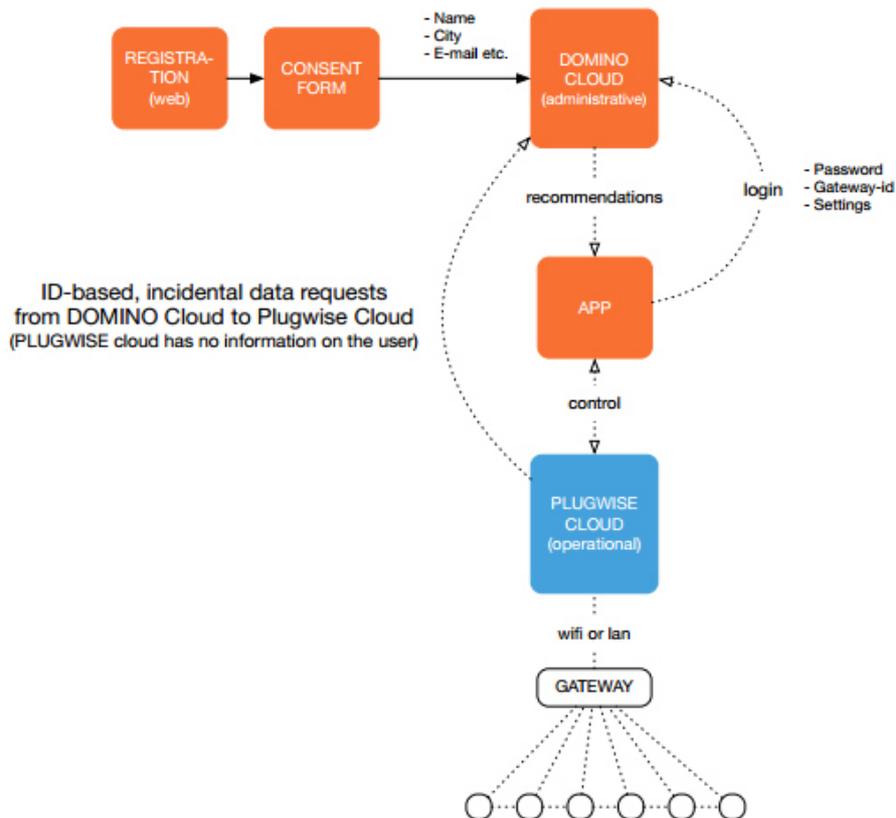




## 2 Plugwise general data and privacy policies

### 2.1 Plugwise gateway and applications

#### Separation of concerns



The DOMINO Challenge is based on two different cloud environments in which data is collected and stored.

For the purpose of the Challenge a specific and separate DOMINO cloud environment has been developed which allows the participants to register (via the specially developed DOMINO registration website). Before the registration can be completed, the participant will have to fill in the Consent Form (see chapter 6) after which certain Personal Data will be stored in the DOMINO cloud for further use during the Challenge, e.g. for determining the winners of the challenge.

The Personal Data will not be available outside this specific DOMINO cloud.

Plugwise will not have general access to any Personal Data from users of Plugwise



gateway- and application based systems.

- The application is available via the relevant app stores and is downloadable without registration.
- During the registration process via the website the user has the possibility to make available to Plugwise his Usage Data by explicitly declaring his permission by ticking a dedicated box.
- Each Plugwise gateway has a unique serial number (ID) which, upon activation through the application, will be connected to the Plugwise cloud based database.
- The Plugwise gateway, called the Stretch, will make a secure internet connection (HTTPS) to the Plugwise database(s) by means of a unique password each time the participant/user uses the gateway and application.

## 2.2 Usage Data

At installation, the user will make a secure connection between the application and the Plugwise gateway only when physically within his existing WLAN network at home. The Plugwise gateway then provides the application automatically with a secure ID and Access Key which allows communication between the application and the Plugwise gateway and Plugwise plugs.

After installation of the Plugwise plugs and initiating the system, the user can access his Plugwise system from outside the house/WLAN network.

Plugwise will, through the Plugwise Cloud, receive and have access to the Usage Data from the devices/appliances that are connected through the plugs to the Plugwise system. This concerns data only regarding the connected devices themselves, i.e.

- the current and historical consumption
- and settings and scheduling data. (This refers to the moments in time in which plugs are switched off/on and the schedule (as set in the app) is activated.)

The historical consumption is available to the corresponding player during the 3 months of his cycle. It includes consumption data in Watts per hour on

- Monthly basis
- Weekly basis
- Daily basis
- Hourly basis

This Usage Data is stored in the Plugwise database in the Plugwise Cloud, based on the Plugwise gateway ID only and will always be anonymous and therefore cannot be traced back to natural persons and/or address details. Through signing the consent form of the DOMINO challenge, the DOMINO player explicitly gives consent to link his Personal Data to the collected Usage Data, for specific situations, i.e. if he/his team wins the challenge or if the Smart Plug equipment has not been passed on to the next player.



Plugwise guarantees that any and all Usage Data that is stored in its database(s) (third party database included) will not in any way and/or for whatever reason be made available to third parties, for example for commercial reasons.

After handing over the Plugwise plugs to the next team member, the Plugwise system will register the new participant (via the Log-in on the app) and the new team member will only be able to see the historical Usage Data from the date of his first log-in.

In other words, Usage Data collected earlier (from earlier participants in the same team) will not be available for the next participants.

## 2.3 Purpose of collecting Data

### 2.3.1 System control

Plugwise collects Usage Data to allow players to gain insights into their appliances' electricity consumption and control it, if they want to reduce it by switching the connected appliances and/or lighting on or off. Insights into consumption and control of devices is also possible from outside the WLAN network. In this case, data will be transferred via the internet to the Plugwise application of a smartphone or tablet.

Access to the plugs via the DOMINO cloud, is only possible once the participant has made an initial connection to the Plugwise gateway (Stretch) and when he has received the secure ID and Access Key during that process on his phone.

It is not possible to use the Cloud based controls (for example switching appliances on or off) without this initial local communication.

### 2.3.2 Analysis of Data

The DOMINO consortium expects to generate data on energy consumption of participants related to different appliances (Usage data) and other optional anonymised data on:

- household size,
- region,
- age,
- gender,
- last year's electricity consumption,
- electricity price,
- connected appliances: energy consumption as indicated by the manufacturer, energy efficiency class, year of construction

and in how far recommendations on saving energy have an effect on behaviour. For this reason feedback clicks for energy saving recommendations will be collected.

In the app the participants are asked to indicate long absence periods (i.e. holidays) retrospectively so that they can be taken into account during data analysis, as well. The data mentioned above is collected for research purposes that are non-commercial and



serve the goal of increasing the knowledge on electricity consumption in different types which can – ultimately – form the basis for activities on reducing electricity consumption. Anonymised data will be analysed by the responsible consortium partners (adelphi, IBGE and ANEA).

Plugwise will make requested anonymised data available to the aforementioned partners for analysis and assure that it will be accessible in readable format (excel, open office...), within maximum 2 weeks after the request and without violation of anonymity of the data.

Metadata (e.g. IP address, location of app user etc.) is not collected with the app. The DOMINO website collects data on the number of users that visited the site from the various target countries. Those are stored for 7 days and then removed (standard procedure).

### **2.3.3 Sharing of Personal Data within the DOMINO Challenge teams**

In view of the key element of the DOMINO Challenge, the creation of teams to compete for a prize (for example, highest total electricity savings within a geographical area), will be supported by the regional DOMINO partners (ANEA, adelphi, and IBGE) in case a complete team cannot be formed by participants themselves. All team member households/participants have be informed for this case that their names will be made known to other team members. This is also covered in the consent form.

### **2.3.4 Public availability of Usage Data**

The DOMINO Challenge administrator Kees Schouten will keep the Usage Data collected throughout the challenge. Anonymised data resulting from the subsequent analysis will be made publicly available through an open access area on the DOMINO website.

### **2.3.5 DOMINO Administrator**

The DOMINO challenge administrator will set up an administrator dashboard and as such will be able to create an account for the regional DOMINO partners. Regional partners cannot get access to the database of Plugwise so they cannot see actual Usage Data. The regional partners can only see if a specific participant/user does indeed use the Plugwise plugs. At all times it is guaranteed through measures and procedures described earlier (see sections 2.1 and 2.2) that the Usage Data cannot in any way be connected to Personal Data.

## **2.4 Plugwise System and Usage Data Security and Retention period**

The Plugwise ZigBee network, gateway and plugs are highly reliable and secure, due to the use of a 128.bit AES encryption. The Usage Data will be stored for an indefinite period in the Plugwise cloud based database, provided by Web Services Hosting Companies Amazon.com and will be hosted in Ireland.



Plugwise guarantees that the data storage (also through their contracted third parties) will be according to the latest and industry accepted Security Standards, in accordance with national legislation and in full harmony with the new General Data Protection Regulation (that succeeds the EU Data Protection Directive (95/46/EC)).

### 2.5 Deletion of Usage data

Due to the fact the Usage Data is fully anonymous, Plugwise can in no practical way delete specific participant/user related Usage Data from its databases, since the database does only register gateway ID related data, and does not know what Usage Data relates to which participant/user. Within the Plugwise organisation the Data Management is allocated to the Data protection employee and falls under the responsibility of the Plugwise Chief Information Officer (CIO), Theo Vroege. Reference is made to the attachment AWS, outlining the Security measures of Amazon.com, the main hosting services partner of Plugwise (cf. Chapter 5).

### 2.6 Logistics

The DOMINO website will generate a list of participants for the first cycle of DOMINO, including their Personal Data (Name, Address, Postal code & Country), which will be transferred by Plugwise to an Excel list for logistic/shipping purposes. Plugwise will hand over this list to its (out-sourced) logistics centre. The logistic centre will ensure that a DOMINO package will be sent to the listed addresses.

Plugwise will separately (before packaging and shipping) scan all unique Stretch IDs allocated to the DOMINO Challenge, to ensure that, upon first installation, the Plugwise back-end will recognize the Stretch ID as part of the DOMINO Challenge.

The individual shipping address will in no way be connected to the unique Stretch ID. The ID list will not be known by third parties nor communicated outside of Plugwise.

Before the actual start of the Challenge the first participants will receive the DOMINO set per FedEx postal services. The administration and handling over of the sets to FedEx will be handled by the independent logistic handling company on mentioned out-sourced basis. They will use the formats as described in Chapter 8.

## 3 DOMINO Registration and Consent procedures

Potential participants of the DOMINO Challenge will be approached via the DOMINO website, social media and offline channels, such as newspaper articles, project presentation during relevant events or flyers. The target group consists of men and women, who are approximately 28-49 years old, tech savvy and own a smartphone. Via the consent form they confirm that they have informed other members of their household



that they take part in the DOMINO project and assure to have obtained consent from the other members as well. The idea is to target people who are living in the areas of Berlin (Germany), Brussels (Belgium) and Naples (Italy). Communication channels will be chosen to particularly fit this group.

The DOMINO web portal is the unique entry point into the challenge. All relevant information for potential participation in the DOMINO challenge, including this data management plan, will be available on the website. Potential participants who want to sign up through the website are asked to read the digital informed consent form (cf. Chapter 6 of this report) and confirm that they agree with the information provided. If they have questions on the consent form or on the data policy, they can submit them through an online form available on the website before participating in the DOMINO challenge. A response will be given to them via email from the data protection officer of the project team within 24 hours on weekdays. Possible risks and discomforts of participants during the research project, e.g. people need to invest some time and effort for setting up the plugs and passing them on to the next person, or participants not saving any energy at all, if they do not follow energy saving tips, are laid out in the consent form and generally they are assumed to remain at a tolerable level.

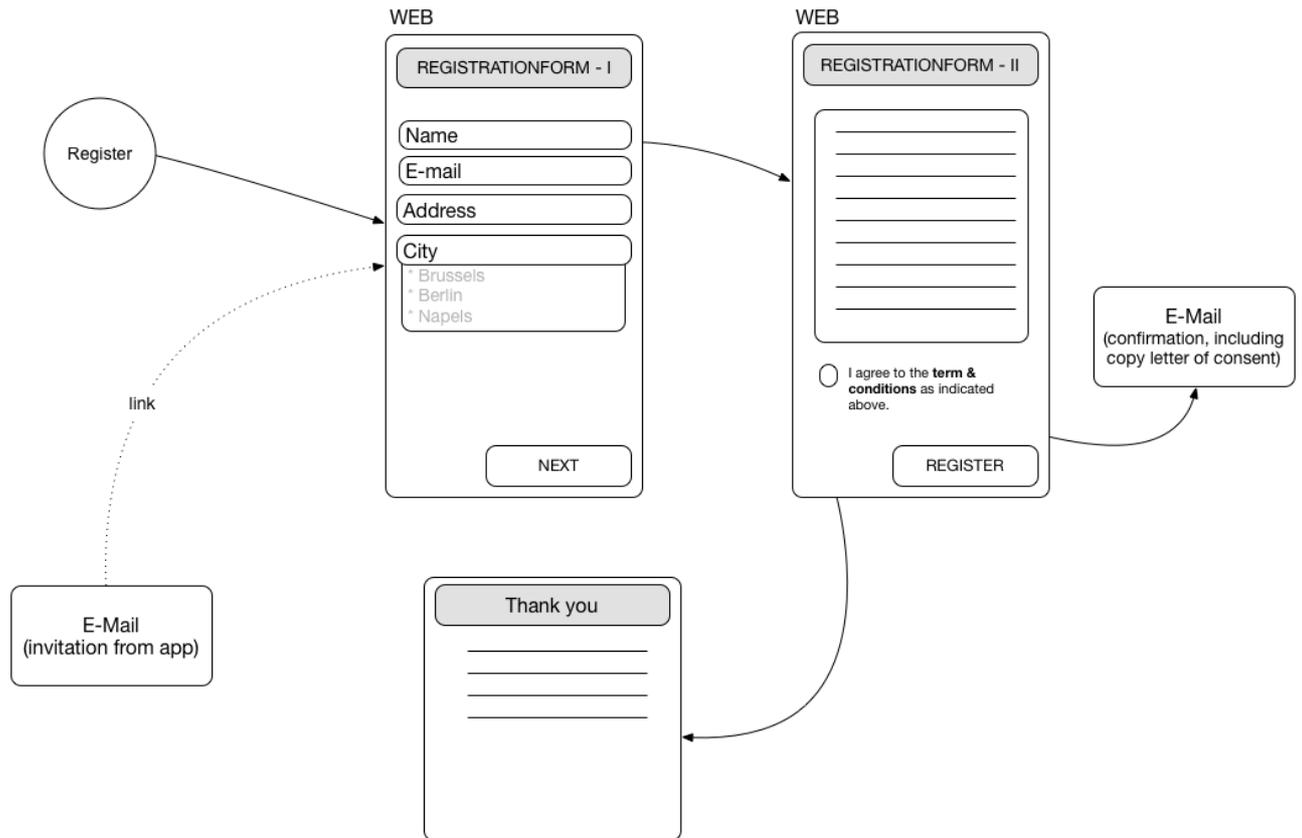
The form will be available in German, French, Dutch and Italian so that participants in the three target regions will be able to fully understand it.

All participants in the DOMINO Challenge are specifically and explicitly informed about the way that their Personal and Usage Data will be collected and administered. On the DOMINO website potential participants will be able to formally agree to the registration and administration of the personal information including:

- First Name, Last Name
- Physical address incl. city, zip Code and country
- Email address
- Choice of language

The data above needs to be collected for sending the plugs to participants, for contacting them in case they receive a prize or have not passed the plugs on.





Languages: English (Default), German, Italian, French, Dutch

Figure1: Required information for registration

The agreement will be gathered via so called opt-in option (“I agree to the terms and conditions” button). Via the URL [www.dominoenergy.eu](http://www.dominoenergy.eu) potential participants will get to the registration page.

The terms and conditions are available for reading in a separate page of the registration process. In case a potential participant does not tick the acceptance button, he/she cannot be registered and cannot participate in the challenge.

After successful registration the first cycle participants will receive a challenge package and will be able to download the DOMINO application from the relevant stores (Android and iOS).

To activate the app the participant will have to log in by using the correct user name, i.e. the email address (as defined by themselves on the DOMINO website).

The DOMINO Challenge will also use the Personal Data to communicate to the participants in the following manner:

- Send them a prize if they win the challenge.



- Send them a reminder if they have not passed on the plugs to the next person in their team.
- Send them automated information on the savings after month two and three of their cycle.
- Send them the invitation to a voluntary project evaluation sheet to a random selection of participants from each country.
- Send them an encouraging email to stick to the energy saving habits they have learned during the project.

The notification of the winners by email (9 teams including overall 45 households) will be done by the project partners. For this they will evaluate the anonymised user data of the participants of the three regions and indicate the team IDs with the best performances to the data manager at Plugwise. For this purpose only, he will pair the user data with the personal data, at the end of the challenge or in the case of Italy at the end of each cycle and communicate the email addresses to the project team who will then inform the winners.

### 3.1 Deletion of Personal Data

All personal data of all the participants will be deleted within the 90 days following the nomination of the winners. Postal addresses will be deleted 90 days after the equipment has been sent out.

## 4 Ethics Issues

### 4.1 Recruitment

Recruitment of participants of the DOMINO Challenge will be done via websites, in newsletters, on social media channels, as well as presenting the challenge in personal interactions in dedicated workshops, meetings or events.

No specific part of the population in the DOMINO assigned geographical target areas are excluded from the challenge, taking into consideration the specifically defined DOMINO target group characteristics. Participants are accepted on a first-come-first-serve basis if they fulfil the minimum requirements for participating in the challenge as described above.

Children under the age of 18 years are not allowed to sign up for the DOMINO Challenge. If they are part of a household that participates in the challenge the person/parent in charge of the child (legal guardian) has to declare his or her consent regarding the participation of the child to the person who signed up for the challenge. Children over 14 additionally have to be informed about the character of the DOMINO challenge and declare their consent to the person who signed up for the challenge.



Participation in the DOMINO Challenge is voluntary and can be ended by the participants at any time without consequences.

#### 4.2 Sensitive Personal Data

At no time during the DOMINO Challenge data will be requested or processed in relation to:

- Health
- Sexual lifestyle
- Ethnicity
- Political opinion
- Religious or philosophical conviction

#### 4.3 Incidental findings policy

The consortium expects to generate data on consumption of participants by household size, region, and gender and in how far recommendations on saving energy have an effect on behaviour. Other anticipated findings are data on electricity consumption of diverse household appliances.

Researcher's duty of care towards their research group suggests that the researcher should disclose unexpected findings that are beneficial to the participants or that could prevent damages to them. This guiding principle is mostly known and applied in the context of medical or psychological studies. Since the DOMINO Challenge is not a medical study, we do not expect any incidental findings that could harm health or well-being of participants.

##### 4.3.1 General policy

Therefore, if the project team comes across general and "benign" incidental findings in the course of this research project, the assumed policy is not to disclose them to the participants nor to other designated parties. Possible risks and discomforts of participants during the research project are laid out in the consent form and generally they are assumed to remain at a tolerable level.

##### 4.3.2 Exception to the general policy

However, in order to assume a reasonable standard of care that should be present in all research (also non-medical), there is one exception to the general policy: In the unlikely event, that findings are made which indicate fundamentally harmful/negative economic or social consequences for the participant, the consortium will inform the participant of these consequences. This approach is intended to protect the participant, as well as the researcher.



The procedure to deal with fundamentally harmful findings is laid out below.

1. The consortium leader adelphi will set up a phone call with all project partners within three weeks to discuss the recommendations to be made to this particular participant to avert future damaging consequences.
2. The consortium will get a second expert opinion from the external advisor on ethics issues, Axel Carlberg (<http://www.upspring.se/contact.html>) within four weeks. Axel Carlberg has extensive experience in ethics analysis in divers EU projects and has declared his availability for the DOMINO project, if necessary.
3. The consortium will inform the EC about the findings and get feedback on the suggested recommendation after step one and two have been executed.
4. If the strategy is agreed on, the regional partners will inform the respective participant about the findings and recommendation in their national languages. The first contact on that issue will be made by email to set up a date when to talk on the phone. If the participant so wishes, one or more follow-up calls can be arranged after a few weeks. The goal of the calls with the participants is to enable him to deal with the consequences in an (for him) appropriate and satisfactory way.
5. Budget for the extra work will be shared by the partners equally. In case a high number of participants need extra care over a longer period of time, some budget from the dissemination activities might be reallocated to this task (in agreement with the EC).

The general outcomes of the project will, as outlined in the project proposal, be published on the project website and is thus accessible for all participants. This is to say that they are transparently informed of research results that the consortium set out to acquire. (Participants might not always keep all the details on purposes of the DOMINO Challenge readily available in their head.)



## 5 Attachment Security Benefits Amazon Web Services

### **Security Benefits of Amazon Web Services (AWS)**

Cloud security at AWS is the highest priority. As an AWS customer, Plugwise benefits from a data centre and network architecture built to meet the requirements of the most security-sensitive organisations.

We refer to: <https://aws.amazon.com/privacy/>

An advantage of the AWS cloud is that it allows its customers to scale and innovate, while maintaining a secure environment.

#### 5.1 Designed for Security

The AWS Cloud infrastructure is operated in AWS data centres and is designed to satisfy the requirements of AWS' most security-sensitive customers. The AWS infrastructure has been designed to provide high availability, while putting strong safeguards in place for customer privacy. All data is stored in highly secure AWS data centres. Network firewalls built into Amazon VPC, and web application firewall capabilities in AWS WAF allows creation of private networks, and control access to the instances and applications.

### Global Infrastructure



Figure 3: Global Infrastructure of AWS

#### 5.2 Highly automated

AWS proposes build security tools, which are tailored for a unique environment, size, and global requirements. Building security tools from the ground up allows AWS to automate



many of the routine tasks security experts normally spend time on. This means AWS security experts can spend more time Amazon Web Services focusing on measures to increase the security of the AWS Cloud environment.

AWS customers also automate security engineering and operations functions using a comprehensive set of APIs and tools. Identity management, network security and data protection, and monitoring capabilities can be fully automated and delivered using popular software development methods. Customers take an automated approach to responding to security issues. When automating and using the AWS services, rather than having people monitor the security position and reacting to an event, the system can monitor, review, and initiate a response.

### **5.3 Highly available**

AWS builds its data centres in multiple geographic Regions. Within the Regions, multiple Availability Zones exist to provide resiliency. AWS designs data centres with excess bandwidth, so that if a major disruption occurs there is sufficient capacity to load-balance traffic and route it to the remaining sites, minimizing the impact on our customers. Customers also leverage this Multi-Region, Multi-AZ strategy to build highly resilient applications at a disruptively low cost, to easily replicate and back up data, and to deploy global security controls consistently across their business.

### **5.4 Highly accredited**

AWS environments are continuously audited, with certifications from accreditation bodies across the globe. This means that segments of your compliance have already been completed.

To help Plugwise meet specific government, industry, and company security standards and regulations, AWS provides certification reports that describe how the AWS Cloud infrastructure meets the requirements of an extensive list of global security standards.

Customers of AWS inherit many controls operated by AWS into their own compliance and certification programs, and run security assurance efforts in addition to actually maintaining the controls themselves.



## 6 Attachment Consent Form

### **Brief introduction of the project**

DOMINO is an EU-funded research project that intends to prompt energy reductions in households. It uses a smart plug technology, where plugs measure electricity consumption of different appliances, to raise awareness for energy consumption and to change the participants' behaviour towards energy saving. The project has chosen a playful approach in form of an energy saving game called "DOMINO Challenge" which is played in teams of five households each. The challenge takes place in Brussels, Berlin, and Naples and will involve around 4000 households. The project results will allow making assumptions on the overall potential of smart plugs for reducing energy consumption in households and will enable related initiatives to benefit from the DOMINO experience. Including preparation and evaluation the project extends over a period of almost three years (March 2016 till end of February 2019).

### **Incidental findings**

If during the course of the project, the project team comes about incidental findings that would have potential or real fundamentally harmful and negative economic or social consequences for a participant, the project team will disclose these findings to the participant. Benign incidental findings will not be disclosed to participants or third parties.

### **Point of contact, if questions on this form arise**

Different organisations are responsible for the DOMINO project in the three regions. For any further questions please contact adelphi in Berlin (Lena Domröse; domroese@adelphi.de), Agenzia Napoletana Energia e Ambiente in Naples (Michele Macaluso; aneainfo@tin.it), or Brussels Environment in Brussels (Xavier Van Roy; xvanroy@environnement.brussels). For data protection queries, please contact Plugwise in the Netherlands (Theo Vroege; t.vroege@plugwise.com).

### Terms and conditions to which I agree by ticking the box<sup>1</sup>:

- My participation in the DOMINO Challenge requires the provision of Personal Data. I agree to provide personal information, such as:
  - First Name, Name

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<sup>1</sup> Next to the box on the website, the following text will be written:

*I have read this form and the research project has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research project described above and will receive a copy of this consent form.*





- Physical address, i.e. street name, street number, city, zip code and country (used for shipment of smart plug equipment)
  - Email address
- If I am the first player of my team, I agree that my name and address data will be transferred by the smart plug producer Plugwise to its (out-sourced) logistics centre and used by FEDEX for shipment.
  - I understand that my postal address will be deleted 90 days after the equipment has been sent out.
  - The DOMINO app will request and collect personal data on my:
    - Age
    - Gender
    - Password
    - Choice of language
    - Number of people in the household
    - Electricity price
    - Electricity consumption from the past year
    - Type/name of appliances connected to the plugs except for the joker plug
    - Appliances; i.e. information on energy efficiency class, year of construction and consumption as indicated by the manufacturer
    - Absence periods during the DOMINO challenge (retrospectively)
  - I understand that my personal data will not be given or sold to any other third party for commercial or other reasons.
  - I understand that the information requested by the app will help the research team in their analysis and it is not mandatory to provide but recommended.
  - I understand that the processing of my personal data relies on my consent, which is necessary to participate to the contest, and is required till the end of the contest to have the chance to win a prize.
  - I understand that my name can be seen by other members of my team.
  - I understand that participation in the DOMINO challenge is voluntary and can be ended at any time without affecting the lawfulness of processing based on my consent before its withdrawal.
  - I agree that my personal data (except for the postal address) will be safely stored until the end of the DOMINO project, i.e. until the end of February 2019. Then it will be deleted.





- I agree that my personal data will be processed by Plugwise and stored in a cloud from Amazon.com, in Ireland.
- I understand that I have the right to request access to my *personal* data, the right to rectification, erasure, or restriction of processing or to object to processing of personal data.
- I agree that the research team collects and analyses the following *usage* data:
  - o the current and historical consumption of my appliances on
    - Monthly basis
    - Weekly basis
    - Daily basis
    - Hourly basis
  - o scheduling data, meaning data on the schedule chosen by myself to switch appliances on and off
- The collected *usage* data will be stored anonymously and separately from the personal data in a secure data base of Plugwise and I understand that this data cannot be deleted from the data base after the project is over because it has been anonymised. It will therefore be stored there for an indefinite period.
- If I click on feedback buttons in the tips and alerts section of the app, I agree that the number of my clicks will be collected. I understand that the collection is necessary so that it can be evaluated which team has most clicks because this is one way to win the DOMINO challenge.
- I agree that my anonymised consumption data will be compared to anonymised data of other users and that general outcomes of the project will be published on the project website and will thus be accessible for all participants and the public.
- I agree that my Usage data will be available outside my local WLAN network when I use the app outside my house and could be accessed by third parties via computer espionage.
- During the DOMINO challenge, I agree to receive certain messages and notifications via the DOMINO app, for example energy saving tips, reminders to set goals and information on the end of my cycle.
- During my 3-month long cycle of DOMINO, I agree to receive monthly emails with information on my monetary and energy savings.
- After my cycle is over, I agree to receive an email asking for evaluating the challenge encouraging me to stick to the energy saving habits I may have adopted.
- When I have allowed push notifications from the app, I understand that the app will be running permanently on my phone.





- I have the right to lodge a complaint with my national Data Protection Authority, if I have doubts concerning data protection measures.
- I have informed members of my household that my household is part of a research project of the European Commission that deals with energy efficiency of household appliances and collects usage data on appliances that are connected to the smart plugs.
- I assure that other household members have expressed their consent to being part of the DOMINO Challenge. Violation of this clause can lead to my exclusion from the DOMINO challenge.
- I understand that the DOMINO Challenge only works if the plugs are passed on from one household to the next and I agree to pass the plugs on to another participating household in due time after my usage cycle has ended. If I am the last player, I will send the plugs back to the responsible project partner in my region within 14 days using the postage label that will be provided on the website: [www.dominoenergy.eu](http://www.dominoenergy.eu).
- If there is reason to believe that I did not pass on the plugs to another household, I agree to receive a notification email from the project team to remind me of that duty.
- I understand that when the smart plugs are used by the next player, statistical consumption data of my appliances, or data on the type of appliances connected, will not be available anymore.
- In case that my team belongs to the winners, I agree that Usage Data will be connected to my Personal Data (Email-address) in order to inform me about the award and to send me the prize.
- I understand that there are possible risks and discomforts, as mentioned above (or: in the data management plan), that might occur during the research project. The risks are: I might not save any energy at all. (For example because I do not (want to) follow the recommendations that are sent to me via the app.
- I understand that I will have to invest some time and effort for setting up the plugs and passing them on to the next person. (It is assumed that setting the system up will take between 10 minutes and 1 hour depending on the technical expertise of people.)
- I refrain from connecting medical equipment or erotic toys to any of the plugs and from naming them correspondingly because obtaining data of this sort of appliances is not desired during the project.
- In the unlikely event, that incidental findings are made which indicate real or potential fundamentally harmful/negative economic or social consequences for me, I allow the project team to contact me.



- I understand that the project team and their companies are not liable for any damage or harm that might occur, unless it is a consequence of intentional or grossly negligent behaviour.





## 7 Attachment Logistics

### Fedex Excel file definition

Excel column	Description	Trans Field #
A (*)	Unique Identification Number of the line	1
B	Recipient Company name	11
C	Recipient Contact Name	12
D	Address line 1	13
E	Address line 2	14
F	Recipient City	15
G (*)	Recipient State code	16
H (*)	Recipient Country code or Country name	50
I (*)	Recipient Postal code	17
J (*)	Recipient Phone number	18
K (*)	Recipient E-mail	1202
L	Recipient VAT or Tax number	118
M (*)	Shipment Reference	25
N	Line numbering (drag down till last line)	38

### Fedex Excel Template

1	11	12	13	14	15	16	50	17	18	1202	118	25
Bus. Code	Company Name	Contact Name	Address Line 1	Address Line 2	City	State Code	Country Code	Zip	Phone	E-mail	VAT_Tax Nr.	Reference
Mandatory Unique ID	Mandatory if no Contact	Mandatory if no Company	Mandatory		Mandatory	Mandatory US-CA	Mandatory	Mandatory	Mandatory			
Max Length	Max. Length	Max. Length	Max. Length	Max. Length	Max. Length	2 Letter ID	2 Ltr ID	Max Length	Numeric field	Max	Max	Max
20	35	35	35	35	35			10	Max. 15	60	18	35

