OPENING UP THE SMART GRID

Data Protection Strategy
Version 1.0
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Version History

Author: EA Technology
Date: 24th March 2017
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<td>Richard Potter</td>
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Final Approval

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<th>WPD authorisation by</th>
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<td>R. Potter</td>
<td>M. Dale</td>
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1. Introduction

1.1. Purpose

The purpose of this document is to outline the strategy for the collection of personal data for the OpenLV project, as defined in the Data Protection Act 1998 [Ref. 1].

1.2. The OpenLV Project

OpenLV\(^1\) is a Network Innovation Competition (NIC) research and development project (the “Project”) that will trial and demonstrate an open, flexible platform that could ultimately be deployed in every HV and LV substation in Great Britain.

The OpenLV Solution (LV-CAP\(^{TM}\)) is a software platform that operates on off-the-shelf commodity hardware. The LV-CAP\(^{TM}\) solution is analogous to a smartphone. In the case of the smartphone an open platform has led to a rapid acceleration in Applications (Apps) provided by a wide variety of organisations, covering a huge array of services. The Project will trial a similar, open platform, but for a substation. It will act as an interface between LV substation assets and the customers that it serves. The project will demonstrate that the Solution can:

- Provide a platform to deploy a workable open substation platform for both monitoring and control of the LV network;
- Create an Eco-System to provide third parties, including community groups with access to network data; and
- Stimulate the Market to facilitate a common platform with low cost entry for a range of new App developers.

To test these aims, the project will apply three Methods, together with a common set of enabling works as shown in Figure 1.

\(^1\) ‘OpenLV’ is the formal and registered project name for contractual and reporting purposes. The brand name may be different for customer-facing recruitment and dissemination purposes.
LV-CAP™ will be installed in 80 LV substations located in the WPD licence area. The Project will use three Methods to demonstrate the platform’s ability to provide benefits to the network owner, customers, and service providers. The three Methods are as follows:

- **Method 1: LV Network Capacity Uplift** - 60 units - This will perform measurements and control within the substation. The Project will deploy proven techniques - ‘Dynamic Thermal Ratings App’ and ‘Network Meshing App’.

- **Method 2: Community Engagement** - 10 units - The platform can be used to provide data to customers or groups of customers. The project will work with community groups to understand whether Apps for their benefit can be developed and installed on the platform and work to identify funding sources that can be used to develop specific Apps for their benefit.

- **Method 3: OpenLV Extensibility** - 10 units - This method will provide a platform for third parties to develop and release their own Apps to provide benefit to DNO and customers alike.

OpenLV is hosted by Western Power Distribution (WPD) and will be delivered by EA Technology.
1.3. Definition of Personal Data

The following definitions are taken from the Data Protection Act 1998:

- **“Personal Data”:** is defined as any information which is capable of being used to identify a living individual. In addition to name, address and contact details, this could include individual preferences, transactional history, record of activities or travels, profiles or credit scores.

- **“Sensitive Personal Data”:** is defined as any personal data that relates to any of the following: racial or ethnic origin, political opinions, religious or other similar beliefs, trade union membership, physical or mental health, sexual life, criminal convictions or proceedings.

- **Data Subject:** the individual of which data is being disclosed or held.

From the above definitions, it follows that some elements personal data will be collected as part of this Project.

1.4. The Data Controller

EA Technology is the 3rd Party Lead Supplier for the Project and is responsible for overall project management and delivery. WPD is the Lead/Funding DNO for the Project providing access to network areas in the UK for undertaking the trials and associated support. As a result, EA Technology will be the “Data Controller” for the Project.

As defined in the Information Commissioners Office, Data sharing code of practice [Ref. 2] a Data Controller is “a person who (either alone or jointly or in common with other persons) determines the purposes for which and the manner in which any personal data are, or are to be, processed”.

1.5. Document Structure

The structure of this document is as follows:

- **Section 2:** Outlines what data will be collected and how it will be used;
- **Section 3:** Lists the data items that will be collected on the Project;
- **Section 4:** Shows how prior information will be provided for Project trial participants and how consent will be provided;
- **Section 5:** Outlines how Personal Data for Priority Services Register (PSR) Customers will be obtained;
- **Section 6:** Outlines who owns the Personal Data utilised as part of the Project;
- **Section 7:** Outlines who owns other data collected as part of the Project;
- **Section 8:** Outlines how long the data will be retained; and
- **Section 9:** Shows how Personal Data will be managed.
2. What data will be collected and how it will be used

2.1. Overview

An overview of the Personal Data requirements for the project are outlined below:

- **Method 1: LV Network Capacity Uplift** - As part of Method 1 the OpenLV Platform will be installed in 60 LV substations in WPD’s license areas. There will be no planned loss in supply to Customers as part of this installation works\(^2\). No personal or sensitive personal data will be collected for this Method.

- **Method 2: Community Engagement** - As part of Method 2 the OpenLV Platform will be installed in 10 LV substations in WPD’s license areas. In order to engage with Community Groups, to promote the use of LV network data by communities or to develop new Apps as part of the Project, a Community Engagement Specialist will be appointed to engage with Community Groups. Whilst it is envisaged that the Project will engage with established Community Groups the Community Engagement Supplier will need to collect names and addresses of Customers within Community Groups. Further information can be found in the OpenLV Customer Engagement Plan [Ref. 3].

- **Method 3: OpenLV Extensibility** - As part of Method 3 the OpenLV Platform will be installed in 10 LV substations in WPD’s license areas. EA Technology will lead engagement with organisations such as companies and universities to promote the use of LV network data by communities or to develop new Apps as part of the Project. Whilst it is envisaged that the Project will engage with organisations rather than individuals EA Technology may need to collect names and addresses of Customers depending upon the uses identified for the LV network data and/or Apps. Further information can be found in the OpenLV Customer Engagement Plan [Ref. 3].

It is envisaged that no Sensitive Personal Data will be collected by the Project.

2.2. Customer data

In terms of Method 2, it is expected that the appointed Community Engagement specialist will hold a database of Community Groups that may be interested in participating in the Project. This database is likely to contain Personal Data such as names, addresses and contact details of individual(s) within Community Groups. This information will be owned by the appointed Community Engagement Supplier and will be used by the Project to engage Community Groups for Method 2.

In terms of Method 3, EA Technology may need to engage with individual Customers. As a result, Personal Data such as names, addresses and contact details of individual(s) will be collected either via a form on the Project website or via third party organisations with existing contacts.

Section 3 outlines all the personal and monitored data collected as part of the Project.

\(^2\) There will be no planned loss in supply for installation works for all Methods.
2.3. Trial data

During the Project trials the following data will be collected from LV substations:

- **Current data**: From all feeders in LV substations where the LV-CAP™ platform will be deployed;
- **Voltage data**: From all monitored transformers where the LV-CAP™ platform will be deployed; and
- **Temperature data**: From all monitored transformers where the LV-CAP™ platform will be deployed.

The Project will target substations that have a load profile utilising a higher proportion of the available capacity. This will guide site selection with a high number of Customers on each feeder. The Project trials will therefore target feeders with more than 10 customers. No individual household load profile will be identifiable from this data therefore this aggregate data is not Personal Data.

The OpenLV systems architecture is shown in Figure 2:

- **The Application Deployment Server**: Will be provided by Nortech and will be used to deploy the Apps for all Methods and to collect trial data for Method 1.
- **The Cloud Based Hosted Platform**: Will be provided by Lucy Electric GridKey and will be used to collect trial data for Methods 2 and 3 for use by Community Groups and third parties.

The trial data will be transmitted securely to both the Application Deployment Server and the Cloud Based Hosted Platform.

Section 3 outlines all the personal and monitored data collected as part of the Project.
3. List of data items

The list of data items is shown in Table 1.

Table 1: List of Data items

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Source</th>
<th>Purpose</th>
<th>Personal Data</th>
<th>Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customer Name, Address, phone number(s) and email addresses</td>
<td>WPD’s MPAS &amp; PSR Community Engagement Supplier Database OpenLV Website Form 3rd Party Organisations</td>
<td>To identify Customers interested in participating in Project trials and contacting them throughout the duration of the Project, as required.</td>
<td>Yes</td>
<td>WPD EA Technology Community Engagement Supplier Economic Assessment and Extrapolation of Community Learning Supplier Marketing, PR and Dissemination Supplier</td>
</tr>
<tr>
<td>2</td>
<td>MPAN</td>
<td>WPD’s MPAS system</td>
<td>To uniquely identify individual Customers for Methods 2 &amp; 3 (if required).</td>
<td>No</td>
<td>EA Technology Economic Assessment and Extrapolation of Community Learning Supplier Community Engagement Supplier</td>
</tr>
<tr>
<td>3</td>
<td>Aggregate current data (per feeder with &gt;10 Customers)</td>
<td>The LV-CAP™ platform</td>
<td>To provide LV network data for use within all Methods.</td>
<td>No</td>
<td>EA Technology WPD Economic Assessment and Extrapolation of Community Learning Supplier Community Engagement Supplier Nortech Lucy Electric GridKey</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Source</td>
<td>Purpose</td>
<td>Personal Data</td>
<td>Sharing</td>
</tr>
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<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>Voltage data from all monitored transformers</td>
<td>The LV-CAP™ platform</td>
<td>To provide LV network data for use within all Methods.</td>
<td>No</td>
<td>EA Technology WPD Economic Assessment and Extrapolation of Community Learning Supplier Nortech³ Lucy Electric GridKey</td>
</tr>
<tr>
<td>5</td>
<td>Temperature data from all monitored transformers</td>
<td>The LV-CAP™ platform</td>
<td>To provide LV network data for use within all Methods.</td>
<td>No</td>
<td>EA Technology WPD Economic Assessment and Extrapolation of Community Learning Supplier Nortech³ Lucy Electric GridKey</td>
</tr>
<tr>
<td>6</td>
<td>Asset ratings (transformers and feeders)</td>
<td>WPD Asset Databases</td>
<td>To provide enable relevant uses of the LV network data to be developed or utilised within Apps for all Methods.</td>
<td>No</td>
<td>EA Technology WPD Economic Assessment and Extrapolation of Community Learning Supplier Nortech³ Lucy Electric GridKey</td>
</tr>
</tbody>
</table>

³ The Application Deployment Server will be hosted in EA Technology’s office. Nortech will have remote access to this Server for maintenance and support throughout the Project.
<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
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<th>Purpose</th>
<th>Personal Data</th>
<th>Sharing</th>
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<tbody>
<tr>
<td>7</td>
<td>LV Network GIS data</td>
<td>WPD GIS Mapping Tool (EMU)</td>
<td>To provide enable relevant uses of the LV network data to be developed or utilised within Apps for all Methods</td>
<td>No</td>
<td>EA Technology WPD Economic Assessment and Extrapolation of Community Learning Supplier Nortech Lucy Electric GridKey</td>
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<tr>
<td>8</td>
<td>Customer feedback from Face to Face interviews (if required)(^4)</td>
<td>EA Technology Community Engagement Supplier Economic Assessment and Extrapolation of Community Learning Supplier</td>
<td>To meet the criteria of Knowledge capture and Dissemination within the Project</td>
<td>Yes</td>
<td>EA Technology WPD Economic Assessment and Extrapolation of Community Learning Supplier Community Engagement Supplier</td>
</tr>
<tr>
<td>9</td>
<td>Customer feedback from online surveys (if required)</td>
<td>EA Technology Community Engagement Supplier Economic Assessment and Extrapolation of Community Learning Supplier</td>
<td>To meet the criteria of Knowledge capture and Dissemination within the Project</td>
<td>Yes</td>
<td>EA Technology WPD Economic Assessment and Extrapolation of Community Learning Supplier Community Engagement Supplier</td>
</tr>
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\(^4\) Items 8 and 9 are “if required”. This is due to the fact the Economic Assessment and Extrapolation of Community Learning Supplier and Community Engagement Supplier have not been appointed at the time of writing this document.
<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Source</th>
<th>Purpose</th>
<th>Personal Data</th>
<th>Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Photos</td>
<td>EA Technology Community Engagement Supplier Marketing, PR and Dissemination Supplier</td>
<td>For marketing the learning from the Project</td>
<td>Yes</td>
<td>EA Technology WPD Community Engagement Supplier Economic Assessment and Extrapolation of Community Learning Supplier Marketing, PR and Dissemination Supplier</td>
</tr>
</tbody>
</table>

At the current time, the uses for the LV Network data and the functionality that will be provided by Apps for Methods 2 and 3 is not known. This document including the above Table will be amended, as required, during the Project.
4. Consent for data use and prior information

As part of the registration process Customer consent will be gained relating to the use of Customer contact details. This consent will be collected via a Form on the Project Website and will be stored in the Website Database that will be hosted by the Projects Marketing, PR and Dissemination Supplier.

The Project website will display information in relation to the Project that the Customer needs to know prior to registering their interest.

All Customers wishing to participate in the Project will be directed to the Project website to fill out the Customer consent form. This online consent form requires Customers to demonstrate positive consent by “opting in” to the Project by selecting a check box. In the event that a Customer cannot access the Project website the Customer will be requested to sign a printed copy (or equivalent) of the website form (See Appendix A), again demonstrating positive consent to participate in the Project.

For marketing purposes, participating Customer(s) may be asked to be photographed in order to help market and disseminate the Project learning. Customers will be asked for permission prior to any photographs being taken and their consent will be recorded via a separate consent form. Any photographs used for marketing purposes will only show basic information; only first names and local town/city will be presented with the photograph. The photographs taken will only be used to promote the Project as agreed with the Customer at the time of giving consent.

5. Priority services register customers

The Project will not actively target PSR Customers. Where individual Customers are engaged on the Project, as part of Methods 2 and 3, they will be cross referenced with WPD’s Priority Services Register (PSR). Participant data will be matched with PSR primarily on addresses and in the exceptional cases where this is not sufficient to match then name data will also be provided. This will allow suitable risk assessments to be made prior to project commencement to ensure that no Customer is put at additional risk through the Project trials.

6. Who owns the personal data

The ownership of personal data is outlined below:

- **Customer Contact Data**: Will be owned by WPD, the Community Engagement Supplier and 3rd party organisations within their existing databases. EA Technology and the Marketing, PR and Dissemination Supplier will own the Customer contact data that is collected as part of the Project.

- **Customer feedback from face to face interviews and online surveys (if required)**: Will be owned by EA Technology, Community Engagement Supplier and Economic Assessment and Extrapolation of Community Learning Supplier.
• Photos: Will be owned by EA Technology and the Community Engagement Supplier.

7. Who owns the other data

All other data, as listed below, will be collected by EA Technology but ultimately owned by WPD:

- Meter Point Access Number (MPAN);
- Aggregate current data (per feeder with >10 Customers);
- Voltage data from all monitored transformers;
- Temperature data from all monitored transformers;
- Asset ratings (transformers and feeders); and
- LV Network GIS data.

8. How long will data be retained

Personal and other data collected specifically for the Project (as listed in Section 3) will be retained until the end of the Project. As part of the project close down procedure, all personal data will be anonymised and the original personal data will be permanently deleted.

The Customer contact data owned by WPD and the Community Engagement Supplier will be retained and dealt with under their existing policies and procedures.

9. Managing personal data on a privacy by design approach

The Information Commissioners Office Data Sharing Code of Practice was used to inform the approach to data sharing [Ref. 2]. EA Technology processes data in accordance with its ICO notification.

The core data protection principles that have been considered for the Project are listed in Table 2.

<table>
<thead>
<tr>
<th>No.</th>
<th>Data Protection Principles</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>“Personal data shall be processed fairly and lawfully and, in particular, shall not be processed unless-(a) at least one of the conditions in Schedule 2 is met, and (b) in the case of sensitive personal data, at least one of the conditions in Schedule 3 is also met”</td>
<td>Sensitive personal data for PSR Customers is held in existing WPD database. This will not be shared. The condition within schedule 2 that is met is that the data being shared for a valid business purpose. i.e. to pursue the legitimate interests of the data controller.</td>
</tr>
<tr>
<td>2</td>
<td>“Personal data shall be obtained only for one or more specified and lawful purposes, and shall not be further processed in any manner incompatible with that purpose or those purposes”</td>
<td>The purpose for which the data may be used by the contractors is clear and bounded (or will be) by contractual arrangements.</td>
</tr>
<tr>
<td>No.</td>
<td>Data Protection Principles</td>
<td>Comment</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>“Personal data shall be adequate, relevant and not excessive in relation to the purpose or purposes for which they are processed”.</td>
<td>Personal data has been limited to that which is required.</td>
</tr>
<tr>
<td>4</td>
<td>“Personal data shall be accurate and, where necessary, kept up to date”.</td>
<td>There are normal processes for sharing updates to address data within the industry.</td>
</tr>
<tr>
<td>5</td>
<td>“Personal data processed for any purpose or purposes shall not be kept for longer than is necessary for that purpose or those purposes”.</td>
<td>Contractual clauses require (or will require) the data to be returned or destroyed at the end of the project.</td>
</tr>
<tr>
<td>6</td>
<td>“Personal data shall be processed in accordance with the rights of data subjects under this Act”.</td>
<td>This data processing and sharing does not contravene the rights of data subjects.</td>
</tr>
<tr>
<td>7</td>
<td>“Appropriate technical and organisational measures shall be taken against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data”.</td>
<td>Secure methods of data transfer and storage will be used and obligations placed on contractors to do the same.</td>
</tr>
<tr>
<td>8</td>
<td>“Personal data shall not be transferred to a country or territory outside the European Economic Area unless that country or territory ensures an adequate level of protection for the rights and freedoms of data subjects in relation to the processing of personal data”.</td>
<td>Data will remain within the European Economic Area.</td>
</tr>
</tbody>
</table>
References

1. Data Protection Act 1988:  
2. Information Commissioners Office, Data sharing code of practice, May 2011:  
Appendix A – Example Project Trial Customer Consent Form

Consent to participate in the OpenLV Trial

To allow your data to be gathered, and to participate in the research for the OpenLV trial.
This consent form confirms my commitment to take part in the OpenLV project, that I will participate in associated research, and that I agree to my data being used for the purposes of the OpenLV project. This consent covers:

- Participation in research
- Collection of my contact data
- Use of my contact data
- My contact details being passed to other project partners or suppliers
- Being sent OpenLV project newsletters and updates

Your details will not be used for marketing purposes.

Please refer to the Customer Engagement Plan and Data Protection Strategy for further information: [link to docs on project website]

<table>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>House number / name</td>
</tr>
<tr>
<td>Initials</td>
<td>Street/ road name</td>
</tr>
<tr>
<td>Surname</td>
<td>Locality</td>
</tr>
<tr>
<td>Contact number</td>
<td>Town/ City</td>
</tr>
<tr>
<td>Email address</td>
<td>Postcode</td>
</tr>
<tr>
<td>Signed</td>
<td>Date</td>
</tr>
</tbody>
</table>

☐ I agree that my contact details can periodically be used to send me updates on the progress of the OpenLV project

☐ I agree that my contact details can be passed to [Economic Assessment and Extrapolation of Community Learning contractor] and that they can contact me for purposes related to the OpenLV project