



Energy Data Innovation Network

GA N. 695916

Deliverable Title	D4.4 Training course materials publicly available on web site
Deliverable Lead:	empirica
Related Work Package:	WP4: Training material preparation
Related Task:	T4.1 Develop training and support materials; Task 4.2 feedback from pilots; T4.3 Improve training and support materials; T 4.4 On-line training
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Dissemination Level:	Public
Due Submission Date:	28.02.2019
Actual Submission:	28.01.2019
Project Number	695916
Instrument:	H2020-EE-2015-3-MarketUptake
Start Date of Project:	01.03.2016
Duration:	36 months
Abstract	This deliverable documents all EDI-Net training materials available online divided into four phases (understand, setup, mobilise and coach).
	<p><i>"This Project has received funding from the European Union's H2020 research and innovation programme under grant agreement No 695916"</i></p> <p><i>"The sole responsibility for the content of this report lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein."</i></p>

Versioning and Contribution History

Version	Date	Modified by	Modification reason
v.01	01.08.2018	Georg Vogt	First draft
v.02	14.09.2018	Georg Vogt	Second draft
v.03	17.12.2018	Strahil Birov	Final draft
v.04	28.01.2019	Darsheet Chauhan	QA edits and Final version

Executive Summary

This deliverable, *D4.4 Training course materials publicly available on web site*, documents the final iteration of training materials developed for EDI-Net users and available online. The materials are divided into four groups, representing steps any organisation can take to support the roll-out and implementation of the EDI-Net service.

The four steps are as follows:

- **Understand:** targeting decision makers to introduce EDI-Net as well as all staff to learn about the system's use. Typical materials include presentations that explain the EDI-Net services and the benefit of using them.
- **Setup:** mostly targeting energy professionals who will implement the solution. Materials comprise different manuals and checklists for the EDI-Net services.
- **Mobilise:** targeting those responsible for user involvement and campaign management. The materials are various and help to develop and execute strategies for user involvement.
- **Coach** targeting anyone to learn about energy efficiency measures. The materials aim to support the momentum of the mobilise phase, and provide personalised information to individuals to ensure their involvement in the long run.

The materials are in different formats, from documents and checklists to presentations and online tools.

They can be easily replicated and customised to, for instance, adapt it to the corporate design of the PPA. All pilots and PPAs are invited to contribute further material and translations which will be included into the repository and shared among the entire EDI-Net community.

The material is available to pilot sites and PPAs via an online guide.

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1 Introduction

This deliverable introduces the four steps for which training materials have been developed (understand, setup, mobilise and coach). The document summarises the content and purpose of a wide range of files provided currently to the pilot sites and the PPAs also via an online guide.

Chapter 2 describes the approach including each step and the material classes.

Chapter 3 describes all already available materials and planned materials.

Chapter 4 provides an overview of sources.

2 Approach

Research on training materials has shown that descriptions on “how to” engage with users to promote energy efficiency services often exist, resulting from piloted projects. There is, however, a lack of supporting materials that were used in the projects and that can be re-used to replicate their success. The few available materials are not user-friendly, i.e. are static uneditable files, do not offer templates, and require a lot of adaptation effort¹.

It is the goal of EDI-Net to provide templates and materials which are accessible online and which can be easily applied in the busy environment of running a municipality. Explanations on best practice of, for instance, how to organise a focus group are kept as brief as possible and templates are provided, easily adaptable for use by the interested authority.

To simplify orientation and to set a clear focus, training materials are grouped in four steps: UNDERSTAND, SETUP, MOBILISE and COACH. They are available on the EDI-Net web-site and the EDI-Net forum.

This section summarises steps and material classes.

2.1 Four-step approach

The structure follows a typical timeline assuming there are other energy efficiency actions (e.g. campaigns) taking place in parallel. This is most likely not the case at least for some stakeholders. Specifically for such cases, the materials have been developed in such a way as to allow selecting elements that can enhance existing efforts at public authority level.

2.1.1 Understand

Understanding the main effect of medication makes people more likely to continue therapy and reduce the chances of side effects. This concept applies to any field where a user is expected to interact with other systems continuously in order to elicit some benefit, be it for themselves directly (e.g. lower energy bills) or indirectly (e.g. greener environment).

With the roll-out and addition of new users the first step should be to explain how EDI-Net can help and what it can do for the local authority and the local environment. This phase has to create interest and achieve a “buy-in” of key actors to ensure EDI-Net can be properly and quickly rolled out and energy efficiency / saving measures are secured.

It might also be necessary to explain why costs matter and have knock-on effects in the non-residential sector. As consumption figures may have little meaning to the average staff, the saving potential could be explained in other forms (e.g. expected yearly savings).

2.1.2 Setup

Setting up the EDI-Net services is most likely to be performed by only a small number of staff such as energy experts. Hence, materials offered in this phase are of mostly technical nature – manuals and guides,

¹ Some projects provide instructions on how best to organise meetings etc. but the content is locked in PDF files.

checklists. Other materials such as video tutorials will target the public but the distribution will be strongly linked with the phase of mobilisation.

2.1.3 Mobilise

Mobilisation requires at least **one person** being in charge of initial activities to make staff and users "understand" the existence and purpose of EDI-Net. This person must also be enabled to delegate responsibility and find means of effortless and direct communication.

Mobilisation, furthermore, requires **all staff** to achieve a minimal degree of proficiency to be able to interpret and use the software offered by EDI-Net.

The majority of techniques apply to all key target groups (energy manager, non-energy financial professional, decision maker and building user). Selected means might be most useful given the organisational structure of the public authority. These differences are pointed out for different approaches rather than listing them individually for each target group hereby avoiding repetition.

2.1.4 Coach

Coaching deepens the understanding of the system gained during the mobilisation phase. Hence, materials are provided for energy 'champions' and other actors to activate further staff to use the platform and learn about energy saving.

Coaching also includes teaching how energy savings can be achieved on individual level, reaching from the building manager to the desk worker.

The additional benefit of coaching is that relationships can be built over a long period of time. Energy efficiency campaigns are often limited in time, thus effort to pass on small pieces of information and advice can establish and maintain relationships between experts and their peers.

2.2 Material classes

In preparation of the training material, EDI-Net has studied a wide range of earlier projects and other resources on energy savings and energy efficiency programmes in residential and non-residential buildings collected in chapter 5.

The material classes are as follows:

Documentation

Documentation provides detail for the various steps to be taken in PDF format. Apart from the layout, the format is not fixed. It can range from a collection of items to a fully fledged manual.

Presentation

Presentations are templates to be used at training sessions and in meetings intended to communicate the idea of EDI-Net. Presentations are only prepared where live sessions in the actual software or videos are not possible or feasible. All presentations are prepared in a design which can easily be adapted to utilise the authorities' corporate design.

Checklist

Checklists collect and summarise necessary or advised steps laid out in documentation material. For checklists to be self-reliant, references to documentation sections are avoided where possible. However, changes in checklists trigger a revision of any documentation and vice-versa. Checklists target staff in charge and any actors taking responsibility such as energy champions.

Awareness material (various formats)

Awareness material is prepared to 'coach' about energy efficiency. The material can be printed in A4, A5 or transferred to stickers. The common PowerPoint format is used, enabling authorities to adapt the templates and, if helpful, adapt for corporate design to increase the impact.

Quiz

EDI-Net provides a set of freely available questions on energy efficiency and energy saving. Quizzes can be single questions or a set of questions. They are set up in LimeSurvey² and can be easily embedded in the authorities' web-site using, for instance, iFrames. Questions are to be translated in the languages of the projects and all versions are available in parallel. If future PPAs wish to utilise the facility in a different language, they only need to translate a selection or the entire set in an Excel file which can then be imported into LimeSurvey and provide a further language available to any future user.

Video

Videos are short clips hosted on a public platform. Typically these videos will be tutorials to explain the functionality of the EDI-Net tool. For the core languages translations will be provided. Other languages can always be implemented via subtitles.

2.3 Involvement of PPAs

The EDI-Net project is continuously inviting other projects and participating authorities to contribute. Additional input can be collected centrally and new versions of templates, files etc. uploaded to the server. New material and significant changes are announced via a newsletter and the forum.

² <https://www.limesurvey.org/>

3 Training materials

This section describes briefly which materials are already available for each step. Screenshots are provided where helpful. The online guideline describes procedures and provides all materials on the EDI-Net web-site.

3.1 Understand

Presentation (file: UNDERSTAND_Presentation_FristImpression) introducing the relevance of energy efficiency and energy saving measures. The presentation can be used to promote the need for the EDI-Net system (decision makers) as well as the opening session to introduce the EDI-Net system to regular staff in smaller meetings etc. Ideally, the presentation is branded with own logos and provides data to the PPA.

Documentation (file: UNDERSTAND_Documentation_Relevance) describing the relevance of ICT-based services such as EDI-Net. It informs about basic statistics with a focus on buildings, how energy efficiency effects consumption, what evidence is available and why behavioural impact will become ever more relevant with improving insulation.

Documentation (file: UNDERSTAND_Documentation_ToolOverview) providing an overview of the different tools targeting the public and professional users.

Presentation (file: UNDERSTAND_Presentation_EnergyProfessionals) introduces background on frequent data collection (AMR and smart meter) as well as the structure of the EDI-Net service. The aim is to achieve quick understanding of the core building blocks of the EDI-Net service to remove barriers during setup.

Presentation (file: UNDERSTAND_Presentation_Dashboard) introduces the dashboard and gives examples on how simplified visualisation allows to quickly detect issues to be investigated.

Presentation (file: UNDERSTAND_Presentation_OverviewSections) introduces the four steps methodology and structure of materials offered.

Video (link: <https://youtu.be/qZThOhoHhnc>) presenting the core features of the EDI-Net tool is available.

Video – Webinar recordings: (link 1: <https://youtu.be/oKnx8GCnJ38>; link 2: <https://youtu.be/LrN5Sojsr5s>; link 3: <https://youtu.be/zWCClaGd35M>) Webinars have been recorded and are advertised in forum and on web site. They cover the topics: Utilising metering data with EDI-Net; Using monthly metering data to benchmark building portfolio; EDI-Net Best Practice Use Cases.

3.2 Setup

Documentation includes a number of manuals with varying focus on user groups.

Note: Manuals are evolving documents according to new functionalities and feedback from the users.

- Manual for experts setting up **EDI-Net dashboard** describing the full range of functionality including extended use cases (file: SETUP_Manual_Dashboard).
 - The content and language is synchronised with the advice notes part of the EDI-Net tool.
- Manual (extended version) for EDI-Net dashboard describing the setup of virtual meters (file: SETUP_Dashboard_Virtual-Meter).

- Manual for public users of the **public area of EDI-Net dashboard** (file: SETUP_Manual_Dashboard-PublicArea).
- Manual for decision makers and financial experts using the **EDI-Net benchmark tool** explaining core functionality (the manual is being edited [online](#), but a final version will also be provided as a file: SETUP_Manual_Benchmark).
- Manual for discourse forum including setup, organisation as well as guidance on how to build a community (SETUP_Manual_Discourse)
- Manual for quizzes and how to integrate them in PPA's own website.

Checklist (file: SETUP_Checklist) contains core steps to be taken within the EDI-Net service as well as along during preparation and communication with other energy professionals.

Presentation (file: SETUP_Presentation_Dashboard) summarising the necessary steps of setup. Intention is limited to training days with numerous PPAs.

Video (link 1: <https://youtu.be/rL08lrUO9g8>; link 2: <https://youtu.be/AKyG56sCkcg>; link 3: <https://youtu.be/93uMRYZOsyQ>; link 4: <https://youtu.be/WVxDmjLzQXk>; link 5: <https://youtu.be/jZXUxwwFjno>) A series of tutorials on the setup of the dashboard is available.

3.3 Mobilise

Presentation (file: MOBILISE_Presentation_Overview) summarising the necessary steps for mobilisation based on content of guides (see below).

Documentation (file: MOBILISE_Documentation_ShortGuide) summarises key steps and actions to be taken to mobilise users. The user might have little experience in the development of a campaign.

Documentation (file: MOBILISE_Documentation_LongGuide) describes background and theory underlying the design of EDI-Net on how to mobilise staff to use the service and become active in energy efficiency measures. The long version also provides academic sources. The user is presumed to be experienced and will design the campaign along existing campaigns in the energy domain at the PPA.

Repository: (file: MOBILISE_Repository) collects a number of templates required to organise work around strategy development, campaign etc. Structure is explained within file. The repository has been extended by the following items originally marked as planned:

- **Checklist** of key steps and responsibilities to be assigned during mobilisation activities as well as how to choose and organise materials designed in a campaign.
- **Checklist** on how to record insights from focus groups on how to conduct a campaign in a municipality using half-hourly data for the first time.
- **Checklist** on how to organise and conduct events such as focus groups, meetings and presentations.

Checklist (file: MOBILISE_Checklist_AsIsAnalysis) providing a template to record the current status of communication and engagement with staff to link available data to methodology proposed by EDI-Net and to show pathways to utilise materials made available by EDI-Net in future steps.

Awareness material repository of a wide range of logo designs to be utilised by PPAs on their web-sites and own campaign material. See www.edi-net.eu

Documentation (see SETUP_Manual_Discourse) providing guidance on how to build a community in the discourse forum.

Awareness material repository (various files) of design templates of a wide range of formats to promote the use of EDI-Net services in the municipality. The designs templates can be utilised to also convey energy efficiency advice (see below) using the EDI-Net design guidelines with or without additional corporate design rules of the respective PPA.

Awareness material repository (on EDI-Net web site) advertising the use of EDI-Net. The focus lies on finding municipalities which do collect at least half-hourly data but are not yet utilising it. The material utilises the dissemination material for EDI-Net.

3.4 Coach

Presentation (file: COACH_Presentation_Overview) summarising the available materials also providing examples on how they can be applied.

Awareness materials

- Collection of a wide range of saving tips relevant for municipalities collected and grouped to be utilised by champions, campaign managers and energy professionals (file: COACH_Documentation_SavingTips-Collection).
- Single sheets with energy efficiency advice in specific circumstances which can be easily adopted to suit corporate design and printed in various formats based on the saving tips collection (file: COACH_Presentation_SavingTips)

Quizzes / Documentaion (file: COACH_Quiz_EnergyEfficiency): Quizzes are part of the public part of the EDI-Net web-site. Furthermore, PPAs can embed the quiz links into their own web-sites and, for instance, include them into logon procedures once every week slowly training staff to learn correct answers. The file contains both links to each quiz, their content as well as facilities for further translation.

Checklist (file: COACH_Checklist_SavingsEnergyManager) of issues an energy manager at building level or below should cover with the start of the EDI-Net service. This includes one-time actions as well as frequent checks. The sheet can also be utilised to delegate tasks to champions and hereby helping to build a community.

Documentation (file: COACH_Tool_Conversion) of conversion factors realised in a spreadsheet. Any energy manager, campaign lead or other can utilise the tool to quickly find a means of describing current consumption or savings achieved in not physical units such as volume of oil, journeys with the car to the moon and back etc.

Awareness material targeting children based on examples from the EDI-Net service and saving tips. This material is available through the best case practice examples available on the forum. No centralised updated version is kept as all approaches appear to be individual.

4 Conclusion

This deliverable has introduced the four steps for which training materials in EDI-Net have been developed:

- Understand
- Setup
- Mobilise
- Coach

The training materials are there to support public authorities to maximise the effects of ICT through behaviour change and awareness raising among the EDI-Net users, including public building visitors. Authorities can select from a multitude of comprehensive materials and easily adapt them to local requirements. The materials are provided on the EDI-Net website and the forum, and thus represent an online repository that can be used beyond the project lifetime and possibly extended through the contribution of other EU projects and initiatives.

5 Sources

Research covered, among others, the following resources:

Quizzes

The portfolio of sources is listed in the quizzes file.

Projects and initiatives

BECA (Balanced European Conservation Approach) – ICT services for resource saving in social housing
<http://beca-project.eu>

BELIEF (Bringing Europe's eElectronic Infrastructures to expanding frontiers)#

CASCADE (cities exchanging on local energy leadership) – <http://cascadecities.eu>

Conurbant – <http://conurbant.eu>

Covenant capaCITY – <http://covenant-capacity.eu>

EMPOWERING (energy counts) – <http://iee-empowering.eu>

EnergyUse (beta) – Public forum on energy efficiency usage: <https://energyuse.eu>

ENGAGE initiative – <http://www.energy-cities.eu/ENGAGE>

FIESTA (family intelligent energy saving targeted action) – <http://www.fiesta-audit.eu/en/>

IMAGINE – <http://www.energy-cities.eu/IMAGINE>

MayorsAdapt initiative – Climate Alliance project partner

NATconsumers (Behavioural change towards energy savings) - <http://natconsumers.eu>

R4E (Roadmaps for energy) – <http://roadmapsforenergy.eu/>

SMARTSPACES (Saving Energy in Europe's Public Buildings using ICT) – ICT-PSP project awarded by UN Global Pulse BigData award: <http://smartspaces.eu>

STEEEP (Support and Training for and Excellent Energy Efficiency Performance) – Intelligent Europe Programme: <http://www.steeep.eu>

National or other

Municipality of Frankfurt – Energy Saving Tool with estimates on saving potentials
<http://energiespartoolbox.stadt-frankfurt.de>

Präsident des Hessischen Rechnungshofs Kommunalbericht 2015 – Assessment of council measures on energy efficiency and energy controlling³

SGCCC (Smart Grid Consumer Collaborative) – <http://smartgridcc.org/>

USA Department of Energy –Database of energy advice and DIY solutions: <https://energy.gov/energysaver>

Sources not accessible:

The deliverables from the project LEAP (leap-eu.org) web-site were no longer available.

³ http://www.rechnungshof-hessen.de/fileadmin/veroeffentlichungen/veroeffentlichungen_uepkk/27-bericht-upkk.pdf