



Repository containing guidelines, recommendations and other training material

E2DRIVER H2020 project

MAIN AUTHOR: CIRCE

DATE: 29/07/2020

PUBLIC

Project **E2DRIVER**

“Training on energy audits as an Energy Efficiency DRIVER for the automotive sector”

Grant Agreement no. 847038

H2020-LC-SC3-EE-2018

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 847038



Document Factsheet	
Project duration	From October 2019 to July 2020.
Project website	www.e2driver.eu
Document	D3.1 – Repository containing guidelines, recommendations and other training material.
Work Package	WP3 – Development of the training methodology and E2DRIVER platform.
Task	Task 3.1 – Information gathering and repository development.
Version	1
Version date	29 July 2020.
Main Author	CIRCE
Contributors	POLITO, EPROPLAN, SINERGIE, ENGIE, EPC.
Reviewers	POLITO, EPROPLAN, SINERGIE, ENGIE, EPC.
Type of deliverable	OTHER
Dissemination level	PU Public

Table 1 Document Factsheet

Document History			
Version	Date	Main modification	Entity
Draft 1	12/06/2020	Structure definition.	CIRCE
Draft 2	03/07/2020	Inclusion of SINERGIE's tables in Annex A.	SINERGIE
Draft 3	06/07/2020	Inclusion of ENGIE's tables in Annex A.	ENGIE
Draft 4	09/07/2020	Deliverable wording completed.	CIRCE
Draft 5	09/07/2020	Inclusion of CIRCE's tables in Annex A.	CIRCE
Draft 6	16/07/2020	Inclusion of EPROPLAN's tables in Annex A.	EPROPLAN
Consolidated	24/07/2020	Minor changes and contributions.	CIRCE / EPC
Final Draft	28/07/2020	Finishing touches.	CIRCE
Final	28/07/2020	Final version.	CIRCE

Table 2: Document History

PROJECT PARTNERS

CIRCE: Fundación CIRCE Centro de Investigación de Recursos y Consumos Energéticos

FRAUNHOFER: Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung e.V.

POLITO: Politecnico di Torino

EPROPLAN: EPROPLAN GmbH Beratende Ingenieure

SINERGIE: Sinergie Società Consortile a Responsabilità Limitata

ENGIE: ENGIE Lab CRIGEN

SERNAUTO: Asociación Española de Proveedores de Automoción

AEN: Automotive.Engineering.Network – Das Mobilitätscluster e.V.

MESAP: Centro Servizi Industrie SRL

MOV'EO: Pole Mov'eo – Mobility Competitiveness Cluster

EPC: EPC Project Corporation Climate. Sustainability. Communications. mbH

MERIT: MERIT Consulting House

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PUBLISHABLE SUMMARY

This deliverable constitutes a justification of the work performed by E2DRIVER consortium in the Task 3.1 – *Repository containing guidelines, recommendations and other training material*.

This task was performed thanks to the close collaboration of the E2DRIVER partners and, mainly, the work of the training entities of the project (CIRCE, ENGIE, EPROPLAN and SINERGIE).

In order to coordinate the work of the training entities in charge of the development of the training materials, first of all, they defined the list of training materials to be made (taking into account the format, the expected main author and the priority of the document). Regarding the format, a preliminary characteristic of each type of training material was set, due to the fact that the final version of the format would be defined afterwards in the context of the Task 2.4 – *Capacity building programme format*.

Afterwards, each training entity generated those training materials under their responsibility. Generally speaking, CIRCE was in charge of the majority part of the repository, while ENGIE, EPROPLAN and SINERGIE developed the materials about contracting, regulation and subsidies from their respective countries. Furthermore, SINERGIE provided introductory materials about conversion of units. All the materials were made in English.

Once the repository was made, each training entity translated the whole repository to their national language. Therefore, CIRCE translated the materials to Spanish, ENGIE to French, EPROPLAN to German and SINERGIE to Italian.

The result of this work is 61 training materials about energy efficiency, energy management, regulation, etc., 49 of them being available in English, German, Spanish, French and Italian, 3 only in German, 3 only in Spanish, 3 only in French and 3 only in Italian.

Furthermore, taking into account that the repository constitutes a living tool of knowledge storing, it is expected that more materials are included during the project lifetime and beyond. Besides, it is necessary to be aware that the already done materials may suffer changes.

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1 INTRODUCTION

During the development of this Task 3.1 – *Repository containing guidelines, recommendations, and other training material*, the E2DRIVER consortium had generated the core of the training materials that will constitute the cornerstone for carrying out the E2DRIVER capacity building programmes. This repository is composed of 61 training materials with several formats such as videos, texts, presentations, and exercises.

After explaining the main objective of the task, this deliverable details two main points:

- Organization of the work to successfully complete the task.
- Characteristics of the repository, amount of training materials generated and the format of each one.

As it is mentioned in this deliverable, the repository constitutes a living tool of knowledge storing. So, although the materials performed until now are the core of the repository, more materials and updates are likely (and desirable) to be included during the whole project lifetime and beyond.

2 GOALS OF THE TASK.

The main goal of this Task 3.1 – *Information gathering, and repository development* is explained in the Grant Agreement:

“the development of currently available best-practices, recommendations and other supporting documents [...] [and, ultimately,] to develop the project’s repository that will be accessible by E2DRIVER trainers as well as by the companies under training”¹.

Specifically, some key points about audits are considered as fundamental. For that reason, it is determined that overall information about energy audits must be included, such as²:

- (1) Benchmark on audits methodology include the standard EN 16247 – 1 to 3;
- (2) Identification of the different methods and the actors involved in audits in each country;
- (3) Regulatory context and regulatory reference specific for each country;
- (4) Prerequisites for the people carrying out audits; and
- (5) Identification of the generic topics to audit (process, utilities, light, HVAC, etc.).

This repository will be included in the E2DRIVER platform and has all the materials that will be used in the E2DRIVER capacity building programmes.

During the development of this task, the needs and interests of the future trainees and their companies had been taken into account by considering the results of the Task 2.2 – *Profile design and characterisation of different roles within industries*. In this task, an energy assessment of each pilot company had been performed, as well as a survey among a representative sample of workers. There, they could express their personal and professional features (needs) and which are their preferences in several pedagogical approaches and topics (interests). All these inputs have been key for determining the materials to be made. Furthermore, the training goals of the E2DRIVER project, the format of the E2DRIVER capacity building programmes defined in Task 2.4 and the features of the Ontological Flip Teaching approach were also considered.

¹ E2DRIVER Grant Agreement. Annex 1 (part A).

² E2DRIVER Grant Agreement. Annex 1 (part A).

3 WORK ORGANIZATION IN THE TASK.

The beginning of this task was centred on the definition of the training materials to be made and the distribution of the responsibilities among the partners: who is in charge of what and when the final version of the materials must be delivered.

To do so, a preliminary list of contents, divided by area and subarea, was defined by CIRCE (Table 3) and was modified afterwards by taking into account the contributions and considerations of the rest of training entities (ENGIE, EPROPLAN and SINERGIE).

Area	Subarea	Resource	Expected main author	Format	Priority
Introduction	Kick-off	Concept and introduction of the Energetic efficiency in the company	CIRCE	Recorded video	High priority
		Concepts about energy	CIRCE	Word	Low priority
		Conversion of units	SINERGIE	Presentation	High priority
			SINERGIE	Word	High priority
Energy efficiency	Energy Efficiency	Energy efficiency in Industries	CIRCE	Exercises	Low priority
		Examples of energy efficiency	CIRCE	Camtasia video	High priority
		Concepts about electricity	CIRCE	Camtasia video	High priority
		Electrical Energy Efficiency	CIRCE	Camtasia video	Medium priority
	Electrical devices	Efficiency in Engines	CIRCE	Camtasia video	High priority
			CIRCE	Camtasia video	High priority
		Efficiency in Cooling processes	CIRCE	Exercises	High priority
			CIRCE	Exercises	Medium priority
		Efficiency in Transformers	CIRCE	Exercises	Medium priority
			CIRCE	Exercises	Medium priority
	Thermal devices	Thermal Energy Efficiency	CIRCE	Camtasia video	High priority
		Boilers	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Furnaces	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
	Horizontal utilities	Dryers	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Efficiency in Lighting	CIRCE	Presentation	High priority
	Buildings		CIRCE	Exercises	Medium priority
		Efficiency in Compressed air	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Efficiency in HVAC	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Efficiency in building envelope	CIRCE	Presentation	High priority
Renewable energy	Renewable energy		CIRCE	Exercises	Medium priority
		Renewable energy integration	CIRCE	Word	Low priority
Energy management	Audits	How to do energy audits?	CIRCE	Presentation	High priority
			CIRCE	Camtasia video	High priority
		Measuring equipment	POUTO	Presentation	High priority
			POUTO	Hands-on exercises	Medium priority
		Virtual reality	POUTO	Hands-on exercises	Medium priority
		Checklist Relevant Information	CIRCE	Word	High priority
		Main Energy Audit steps	CIRCE	Presentation	High priority
			CIRCE	Hands-on exercises	Medium priority
		How to present measures	CIRCE	Camtasia video	High priority
			CIRCE	Exercises	High priority
	Energy Culture	Development of an action plan	CIRCE	Presentation	High priority
		Measurement and Verification	CIRCE	Camtasia video	High priority
			CIRCE	Exercises	Medium priority
		EN16247:2015	CIRCE	Presentation	High priority
		Energy Management: process integration	CIRCE	Recorded video	High priority
			CIRCE	Camtasia video	High priority
		Targets and Goals	CIRCE	Hands-on exercises	Medium priority
		Best Environmental Management Practice	CIRCE	Presentation	High priority
		Communication & Cooperation in EnMS	CIRCE	Camtasia video	High priority
		High-level positions - Comparing actual versus target	CIRCE	Recorded video	High priority
	Energy awareness	General Employees - Communication - Comparing actual versus target	CIRCE	Camtasia video	High priority
			CIRCE	Camtasia video	High priority
		ISO 50001:2018	CIRCE	Hands-on exercises	Medium priority
		Role Play Rewarding suggestions	CIRCE	Word	High priority
		Employee motivation for energy efficiency and climate protection	CIRCE	Hands-on exercises	High priority
		Awareness in Energy Efficiency	CIRCE	Presentation	High priority
	Monitoring		CIRCE	Recorded video	High priority
		Self-evaluation	CIRCE	Self-evaluation	Medium priority
		Best Practice on Monitoring and Benchmarking	CIRCE	Camtasia video	High priority
			CIRCE	Camtasia video	High priority
Regulation	Energy contracting	Spain	CIRCE	Word	High priority
		Germany	EPROPLAN	Word	High priority
		Italy	SINERGIE	Word	High priority
		France	ENGIE	Word	High priority
	Legislation		CIRCE	Word	High priority
		Spain	CIRCE	Word	High priority
		Germany	EPROPLAN	Word	High priority
		Italy	SINERGIE	Word	High priority
		France	ENGIE	Word	High priority
			CIRCE	Word	High priority
Electric vehicle	Future of the sector		CIRCE	Word	High priority
		Sustainable mobility and future of the automotive sector	CIRCE	Recorded video	Medium priority
	Electric vehicle		CIRCE	Word	Medium priority
		General approach: electric vehicles	CIRCE	Recorded video	Medium priority
			CIRCE	Word	Medium priority
		Operation and parts of the electric vehicles	CIRCE	Recorded video	Medium priority

Table 3. List of contents to be developed.

In total, 78 training materials were planned. In this list, the training entities defined the topic of each content, the title of the material, the expected main author (CIRCE / ENGIE / EPROPLAN / SINERGIE), the format (Word document / PowerPoint presentation / Video / Exercises / Hands-on) and the priority of each one (Low / Medium / High priority).

Regarding the format of those materials, due to the fact that the final definition of the format was performed in Task 2.4 – *Development of the training format and main capacity building program requirements* and that this Task 3.1 about the repository of contents was started four months before the Task 2.4, a general format of the training materials was defined in January 2020 with the purpose of having a base for the development of the materials (Table 4).

Formats			
Recorded video	20-30 minutes.	at home - online	Video where a trainer is recorded while (s)he explains something.
Camtasia video	20-30 minutes.	at home - online	Video where a trainer explains a presentation using powerpoint or camtasia. Here the trainer doesn't appear in the video, just his/her voice. Example: https://scoope.eu/scoope-energy-manager-webinars/ If you prefer to use the powerpoint recording, it is really easy: > If you want to record your screen in PowerPoint (not only the presentation, but the whole screen): https://support.office.com/en- > If you want to record just the presentation in PowerPoint: https://support.office.com/en-gb/article/record-a-slide-show-with- > In order to turn your presentation into a video (please, keep in MP4 / MPEG4 and be patient with the export): https://support.office.com/en-
Word	10-12 sheets	at home - online	Written theoretical content (word document or pdf).
Presentation	30-35 sheets	at home - online	Theoretical content using a presentation (ppt).
Hands-on exercises	x	in class - face to face	The main objective of the face-to-face classes is to perform a final practical lesson including an interactive session to discuss about potential energy efficiency measures that could be implemented in the company. Hands-on, interactive exercises, storytelling, brainstorming sessions, discussions
Exercises	x	Both, in class and at home	Traditional exercises.
Self-evaluation	x	at home - online	Test or some kind of evaluation exercises where trainees are able to test
Virtual reality	x	in class - face to face	Virtual reality.

Table 4. Preliminary format defined in Task 3.1 in order to develop the materials.

This was just a preliminary format defined in order to facilitate the work of the training entities in this task where they generated the training materials. Afterwards, in the Deliverable 2.4 – *Capacity building programme format*³, the format of the training materials was deeply deployed and, in some cases, the characteristics changed. For instance, the length of the videos was considered as too long, so, the advice was to maintain a duration of 10 minutes (although the maximum limit was 20-30 minutes).

Once the contents to be made and the format were defined, the four training entities were able to start the development of the training materials. The whole repository was made from February to June.

Despite the planning of 78 training materials, it was not possible to develop the whole list of training materials due to different contingencies. For instance, it is possible to highlight the next:

- We foresaw two types of videos. The first type is just a recording of the computer screen at the same time as the trainer explains a presentation, while the other format is a more sophisticated version where the trainer would appear in the video while explaining something. Due to the coronavirus pandemic, the people in charge of developing the second type were teleworking with no technical support for recording those videos. For that reason, the majority

³ http://e2driver.eu/wp-content/uploads/2020/06/E2DRIVER_D2.4_Capacity-building-programme-format_29.05.2020_CIRCE.pdf

of the videos was recorded by using the first approach, while the recording of the rest of the videos was postponed until the moment it is possible to record them properly.

- The development of other materials has been also postponed because it is desirable to make them by taking into account other project results that have not been already made. For instance, the materials about “measuring equipment” will be developed by using the Virtual Reality contents that are being created by POLITO in the context of the Task 3.4 – *Development of virtual/augmented reality training material*. For that reason, these materials should be integrated in the repository after the end of this task. Furthermore, there are other examples that depend on other project results in order to be made, such as materials that will show how the E2DRIVER energy assessment tool or the E2DRIVER self-assessment financial tool work.

In summary, a total of 61 training materials had been developed (Table 5):

- 8 videos. (*Table 5 shows 9 videos, but one of them is not ready yet.)
- 16 Word documents.
- 22 PowerPoint presentations.
- 15 packs of exercises.

Area	Subarea	Resource	Expected main author	Format	Priority
Introduction	Kick-off	Concepts about energy	CIRCE	Presentation	High priority
		Conversion of units	SINERGIE	Word	High priority
			SINERGIE	Exercises	Low priority
Energy efficiency	Energy Efficiency	Energy efficiency in industries and examples	CIRCE	Camtasia Video	High priority
		Concepts about electricity	CIRCE	Presentation	Medium priority
	Electrical devices	Efficiency In Engines	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Efficiency In Cooling processes	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Efficiency In Transformers	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
	Thermal devices	Boilers	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Furnaces	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
	Horizontal utilities	Efficiency in Lighting	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Efficiency in Compressed air	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
	Buildings	Efficiency in HVAC	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
Renewable energy	Renewable energy	Efficiency in building envelope	CIRCE	Presentation	High priority
			CIRCE	Exercises	Medium priority
		Renewable energy integration	CIRCE	Presentation	High priority
		Photovoltaic energy	CIRCE	Presentation	High priority
		Mini-Wind energy	CIRCE	Presentation	High priority
		Solar thermal energy	CIRCE	Presentation	High priority
		Geothermal energy	CIRCE	Presentation	High priority
		How to do energy audits?	CIRCE	Camtasia Video	High priority
		Checklist Relevant information	CIRCE	Word	High priority
		Main Energy Audit steps	CIRCE	Presentation	High priority
Energy management	Audits		CIRCE	Hands-on exercises	Medium priority
		How to present measures	CIRCE	Presentation	High priority
			CIRCE	Exercises	High priority
		Development of an action plan	CIRCE	Presentation	High priority
		Measurement and Verification	CIRCE	Camtasia Video	High priority
			CIRCE	Exercises	Medium priority
		EN16247:2015	CIRCE	Presentation	High priority
		Targets and Goals	CIRCE	Camtasia Video	High priority
	Energy Culture	Communication & Cooperation in EnMS	CIRCE	Camtasia Video	High priority
		High-level positions	CIRCE	Camtasia Video	High priority
		General Employees - Motivation	CIRCE	Camtasia Video	Medium priority
			CIRCE	Camtasia Video	High priority
		ISO 50001:2018	CIRCE	Hands-on exercises	Medium priority
	Energy awareness	Role Play Rewarding suggestions	CIRCE	Hands-on exercises	High priority
		Awareness in Energy Efficiency Employee motivation for energy efficiency	CIRCE	Presentation	High priority
	Monitoring	Best Practice on Monitoring and Benchmarking	CIRCE	Camtasia Video	High priority
			CIRCE	Word	High priority
	Energy contracting	Spain	CIRCE	Word	High priority
		Germany	EPROPLAN	Word	High priority
		Italy	SINERGIE	Word	High priority
		France	ENGIE	Word	High priority
Regulation	Legislation	Spain	CIRCE	Word	High priority
		Germany	EPROPLAN	Word	High priority
		Italy	SINERGIE	Word	High priority
		France	ENGIE	Word	High priority
	Subsidies	Spain	CIRCE	Word	High priority
		Germany	EPROPLAN	Word	High priority
		Italy	SINERGIE	Word	High priority
		France	ENGIE	Word	High priority
Electric vehicle	Electric vehicle	General approach: electric vehicles	CIRCE	Word	Medium priority
		Operation and parts of the electric vehicles	CIRCE	Word	Medium priority

Table 5. Training materials made until now.

Furthermore, considering the contingencies previously mentioned, at least, 7 more training materials will be included subsequently. Despite that, it is necessary to consider that the repository is a living tool, so, surely, more training materials will be included during the whole project lifetime and beyond, as well as some of the already made will be modified in order to be better adapted.

The majority part of these materials is available in five languages (English, German, Spanish, French and Italian). The materials were made in English and, afterwards, each E2DRIVER training entity was in charge of the translation to their national language. Thus, EPROPLAN was in charge of translating the repository to German, CIRCE to Spanish, ENGIE to French and SINERGIE to Italian. However, there were some cases where the training material is only available in one language. For instance, those materials that address specifically the situation in only one country. Thus, there are twelve documents about regulation, subsidies and subcontracting in Germany, Spain, France and Italy that are only available in their respective national languages.

4 REPOSITORY OF TRAINING MATERIALS.

4.1 General aspects of the repository.

The repository of contents is divided into six thematic sections (Table 3 and Table 5):

- Introductory energy concepts,
- Energy efficiency,
- Renewable energies,
- Energy management,
- Regulation and
- Electric vehicle.

The materials address technical and non-technical aspects that impact in the day-to-day energy performance of the companies such as the energy efficiency of specific equipment.

The training materials have been made by following the preliminary format defined in this Task 3.1 (Table 4) and, afterwards, the format of the training materials established in Task 2.4⁴:

- Videos: are used for transferring theoretical knowledge. The majority part of the videos developed have a duration of around 10 minutes.
- Word documents: provide trainees theoretical knowledge in the different topics considered in the project. Although the recommended length was 10-13 sheets, the texts included in the repository have varying sizes depending on the topic addressed and the training needs considered when it was made.
- PowerPoint presentations: used for providing theoretical contents to trainees, as well as they are a tool that trainers can use for performing the on-site sessions. These materials are more visual than texts. However, in some cases, the presentations content large and detailed explanation, since these materials are thought as a document that will be consulted directly by trainees. As with texts, the length of these presentations has varying sizes.
- The rest of the repository are composed by exercises and tests that will be integrated in the platform, as well as it has been designed several group exercises for the on-site sessions.

4.2 Training contents.

Next, a short explanation of what is addressed in each thematic section is performed. For more detailed information about the materials, there are one table per training material in Annex A where their characteristics are explained.

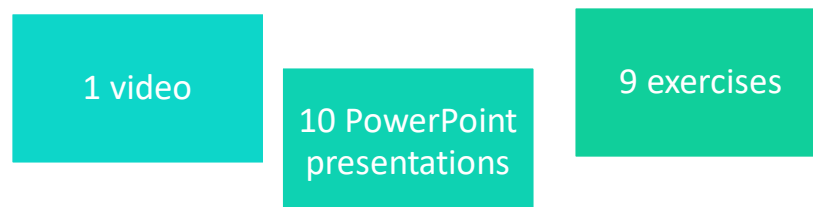
⁴ For more information about the format, consult the deliverable 2.4: http://e2driver.eu/wp-content/uploads/2020/06/E2DRIVER_D2.4_Capacity-building-programme-format_29.05.2020_CIRCE.pdf

4.2.1 Introductory energy contents.



In this section, the materials generated are mainly focused on preparing trainees to understand the rest of the training contents. Thus, these materials are connected with general aspects about energy, as well as with conversion of units.

4.2.2 Energy efficiency contents.



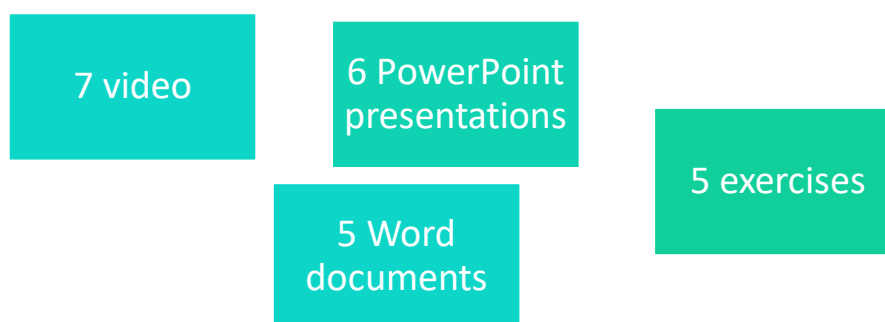
This section performs an analysis of the energy efficiency in the different equipment that are expected to be found in the facilities of the automotive sector. Thus, the energy efficiency and best practices in engines, cooling processes, transformers, boilers, furnaces, lighting, compressed air, HVAC and building envelope are explained here.

4.2.3 Renewable energy contents.

5 PowerPoint presentations

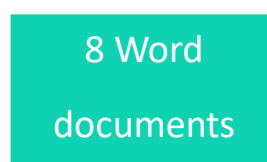
This section seeks to provide some general information about the possibilities of renewable energies integration in the automotive industries. To do so, one presentation about renewable energies integration and 4 presentations about different types of renewable energies (photovoltaic, mini-wind, solar thermal and geothermal) had been made.

4.2.4 Energy management contents.



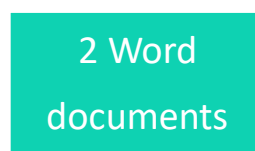
Considering the goal of E2DRIVER project, this section (together with the energy efficiency one) is the core of the training material repository. For that reason, a large part of the training materials generated are included. Here, it is possible to find the materials about energy audits, energy culture, energy awareness, monitoring and energy contracting.

4.2.5 Regulation contents.



In this section, it is analyzed the regulation and the subsidies available in Germany, Spain, Italy and French.

4.2.6 Electric vehicle contents.



This is a complementary session where general information about the expected evolution of the automotive sector, as well as introductory knowledge about what is an electric vehicle and how it works are provided.

5 CONCLUSIONS

In this deliverable, it is explained how E2DRIVER team had made the repository of contents, as well as the characteristics of the training materials.

61 training materials had been already made and constitute the hearth of the repository and, therefore, the core of the E2DRIVER training actions. However, considering that the needs and interests may vary during the project lifetime, it is expected that this repository constitutes a living tool of knowledge storing with constant updates and inclusion of new materials.

6 REFERENCES

E2DRIVER Grant Agreement. Annex 1 (part A).

Deliverable 2.2 – *E2DRIVER trainees' target groups definition*. http://e2driver.eu/wp-content/uploads/2020/04/E2DRIVER_D2.2_E2DRIVER-Trainees-Target-Groups-Definition.pdf

Deliverable 2.4 – *Capacity building programme format*. http://e2driver.eu/wp-content/uploads/2020/06/E2DRIVER_D2.4_Capacity-building-programme-format_29.05.2020_CIRCE.pdf

7 ANNEXES

7.1 Annex A: Repository contents.

7.1.1 Introductory contents.

CONCEPTS ABOUT ENERGY				
General aspects	Title	Concepts about energy.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	X
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation.		
	Topic	General explanation about what the energy and energy efficiency are.		
	Length	17 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	To transfer the fundamental knowledge about energy to the trainees.		
	Pedagogical justification	There are some potential trainees that have expressed their limited knowledge in this field.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 6. Training material: Concepts about energy.

CONVERSION OF UNITS			
General aspects	Title	Conversion of units.	
	Place in the repository	AREA	SUBAREA
		Introduction.	Kick-off. X
		Energy efficiency.	Energy efficiency.
			Electrical devices.
			Thermal devices.
			Horizontal utilities.
			Buildings.
		Renewable energy.	Renewable energy.
		Energy management.	Audits.
			Energy culture.
			Energy awareness.
			Monitoring.
			Energy contracting.
		Regulation.	Legislation.
Main features	Format	2 Word documents: 1 for lesson + 1 for exercises	
	Topic	General explanation about conversion of units with examples and exercises.	
	Length	23 + 10 pages.	
	Language	English, German, Spanish, Italian and French.	
Pedagogical and methodological	Training goal	To transfer trainee's basic knowledge about units and their conversion.	
	Pedagogical justification	It's important to transfer basic knowledge in order to make all trainees able to use and convert the most common units of measure adopted in the context of energy management.	
	Ontological Flip Teaching level	X	At home.
			In class.
			Suggestion for new material.

Table 7. Training materials: Conversion of units.

7.1.2 Energy efficiency contents.

ENERGY EFFICIENCY IN INDUSTRIES				
General aspects	Title	Energy efficiency in industries		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	X
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
Main features	Format	Video + PowerPoint presentation.		
	Topic	General explanation about what energy efficiency is, how it can be measured and examples of EEMs.		
	Length	5-minute video. 21 slides.		
	Language	Video in English with subtitles in English, German, Spanish, Italian and French. Presentation in English, German, Spanish, Italian and French.		
Pedagogical and methodo-	Training goal	To introduce trainees to energy efficiency and its primary concepts.		
	Pedagogical justification	There are some potential trainees that have expressed their limited knowledge in this field.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 8. Training materials: Energy efficiency in industries.

CONCEPTS ABOUT ELECTRICITY			
General aspects	Title	Concepts about electricity.	
	Place in the repository	AREA	SUBAREA
		Introduction.	Kick-off.
		Energy efficiency.	Energy efficiency.
			Electrical devices.
			Thermal devices.
			Horizontal utilities.
			Buildings.
		Renewable energy.	Renewable energy.
		Energy management.	Audits.
			Energy culture.
			Energy awareness.
			Monitoring.
			Energy contracting.
		Regulation.	Legislation.
Main features	Format	PowerPoint presentation.	
	Topic	General explanation about what electrical concepts to serve as a basis for more advanced concepts in following resources.	
	Length	13 slides.	
	Language	English, German, Spanish, Italian and French.	
Pedagogical and method-	Training goal	To introduce trainees to the primary concepts of electricity.	
	Pedagogical justification	Potential trainees without an electricity background.	
	Ontological Flip Teaching level	X	At home.
			In class.
			Suggestion for new material.

Table 9. Training materials: Concepts about electricity.

EFFICIENCY IN ENGINES			
General aspects	Title	Efficiency in engines	
	Place in the repository	AREA	SUBAREA
		Introduction.	Kick-off.
		Energy efficiency.	Energy efficiency.
			Electrical devices.
			Thermal devices.
			Horizontal utilities.
			Buildings.
		Renewable energy.	Renewable energy.
		Energy management.	Audits.
			Energy culture.
			Energy awareness.
			Monitoring.
			Energy contracting.
		Regulation.	Legislation.
			Subsidies.
		Electric vehicle.	Future of the sector.
			Electric vehicle.
Main features	Format	PowerPoint presentation + Test exercises.	
	Topic	Performance assessment and energy efficiency measures related to electrical engines.	
	Length	21 slides.	
	Language	English, French, German, Italian and Spanish.	
Pedagogical and methodological	Training goal	Introduce an array of options to assess energy efficiency potential in engines and define potential energy efficiency measures to be implemented.	
	Pedagogical justification	These systems are present in automotive industries and have a potential for improvement.	
	Ontological Flip Teaching level	X	At home.
			In class.
			Suggestion for new material.

Table 10. Training materials: Efficiency in engines.

EFFICIENCY IN COOLING PROCESSES				
General aspects	Title	Efficiency in cooling processes		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	X
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation + Test exercises.		
	Topic	Performance assessment and energy efficiency measures related to cooling processes.		
	Length	16 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Introduce an array of options to assess energy efficiency potential in cooling processes and define potential energy efficiency measures to be implemented.		
	Pedagogical justification	These systems are present in automotive industries and have a potential for improvement.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 11. Training materials: Efficiency in cooling processes.

EFFICIENCY IN TRANSFORMERS				
General aspects	Title	Efficiency in transformers		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	X
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
Main features	Format	Powerpoint presentation + Test exercises.		
	Topic	Performance assessment and energy efficiency measures related to transformers.		
	Length	6 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Introduce an array of options to assess energy efficiency potential in transformers and define potential energy efficiency measures to be implemented.		
	Pedagogical justification	These systems are present in automotive industries and have a potential for improvement.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 12. Training materials: Efficiency in transformers.

EFFICIENCY IN BOILERS				
General aspects	Title	Efficiency in boilers		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	X
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
Main features	Format	PowerPoint presentation + Test exercises.		
	Topic	Performance assessment and energy efficiency measures related to boilers		
	Length	41 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Introduce a description of the equipment, properties and characteristics, and information to assess the energy efficiency potential and define possible energy efficiency measures to be applied in both conventional and steam boilers.		
	Pedagogical justification	These systems may be present in some sub-processes of the automotive industries.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 13. Training materials: Efficiency in boilers.

EFFICIENCY IN FURNACES				
General aspects	Title	Efficiency in Furnaces		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	X
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation + Test exercises.		
	Topic	Performance assessment and energy efficiency measures related to furnaces.		
	Length	32 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Presentation of the properties of these systems, typologies according to uses and involvement in different processes in the automotive sector. Characteristics and options to improve their energy performance.		
	Pedagogical justification	These systems are present in some specific processes in the automotive sector.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 14. Training materials: Efficiency in furnaces.

EFFICIENCY IN COMPRESSED AIR				
General aspects	Title	Efficiency in compressed air		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	X
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation + Test exercises.		
	Topic	Performance assessment and energy efficiency measures in compressed air systems.		
	Length	16 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Introduce an array of options to assess energy efficiency potential in compressed air systems and define potential energy efficiency measures to be implemented.		
	Pedagogical justification	These systems are present in automotive industries and have a potential for improvement.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 15. Training materials: Efficiency in compressed air.

EFFICIENCY IN LIGHTING				
General aspects	Title	Efficiency in lighting		
		AREA	SUBAREA	
	Place in the repository	Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	X
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
Main features	Format	PowerPoint presentation + Test exercises.		
	Topic	Performance assessment and energy efficiency measures in lighting systems.		
	Length	18 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Introduce an array of options to assess energy efficiency potential in lighting systems and define potential energy efficiency measures to be implemented.		
	Pedagogical justification	These systems are present in all automotive industries and have a potential for improvement.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 16. Training materials: Efficiency in lighting.

EFFICIENCY IN HVAC			
General aspects	Title	Efficiency in HVAC systems	
	Place in the repository	AREA	SUBAREA
		Introduction.	Kick-off.
		Energy efficiency.	Energy efficiency.
			Electrical devices.
			Thermal devices.
			Horizontal utilities.
			Buildings.
		Renewable energy.	Renewable energy.
		Energy management.	Audits.
			Energy culture.
			Energy awareness.
			Monitoring.
			Energy contracting.
Main features	Format	PowerPoint presentation + Test exercises.	
	Topic	Performance assessment and energy efficiency measures in HVAC systems	
	Length	44 slides.	
	Language	English, German, Spanish, Italian and French.	
Pedagogical and methodological	Training goal	Introduce an array of options to assess energy efficiency potential in HVAC systems and define potential energy efficiency measures to be implemented.	
	Pedagogical justification	These systems are present to condition some areas of an industrial plant.	
	Ontological Flip Teaching level	X	At home.
			In class.
			Suggestion for new material.

Table 17. Training materials: Efficiency in HVAC.

EFFICIENCY IN BUILDINGS ENVELOPE				
General aspects	Title	Building Envelope		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	X
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation + Test exercises.		
	Topic	Performance assessment and energy efficiency regarding the energy demand of a building.		
	Length	23 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Review aspects related to the building envelope, ways of calculating losses, and general concepts related to the thermal demand of buildings to be considered in industrial buildings through the roofs or facades		
	Pedagogical justification	General aspects to know in order to identify discomfort problems that can be suffered inside an industrial building.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 18. Training materials: Efficiency in Buildings.

7.1.3 Renewable energy contents.

RENEWABLE ENERGY INTEGRATION				
General aspects	Title	Renewable energy integration		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	X
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
Main features	Format	PowerPoint presentation.		
	Topic	Introduction to renewable energy and the associated regulation		
	Length	9 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodology	Training goal	Introduce common topics between renewable technologies as a basis for the following resources.		
	Pedagogical justification	Pilot industries shared an interest on renewable energy.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 19. Training materials: Renewable energy integration.

PHOTOVOLTAIC ENERGY				
General aspects	Title	Photovoltaic energy		
		AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	X
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation.		
	Topic	Characteristics, basic schemes, technologies and design and sizing criteria for photovoltaic energy installations		
	Length	24 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	Present the possibilities for photovoltaic energy integration in industries and the principles to assess its potential		
	Pedagogical justification	Pilot industries shared an interest on renewable energy.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 20. Training materials: Photovoltaic energy.

SMALL WIND ENERGY				
General aspects	Title	Small Wind energy		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	X
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
Main features	Format	PowerPoint presentation.		
	Topic	Characteristics, basic schemes, technologies and design and sizing criteria for small wind energy installations		
	Length	21 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodo-	Training goal	Present the possibilities for small wind energy integration in industries and the principles to assess its potential		
	Pedagogical justification	Pilot industries shared an interest on renewable energy.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 21. Training materials: Small wind energy.

SOLAR THERMAL ENERGY				
General aspects	Title	Solar thermal energy		
		AREA	SUBAREA	
	Place in the repository	Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	X
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
Main features	Format	PowerPoint presentation.		
	Topic	Characteristics, basic schemes, technologies and design and sizing criteria for solar thermal energy installations		
	Length	17 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodo-	Training goal	Present the possibilities for solar thermal energy integration in industries and the principles to assess its potential		
	Pedagogical justification	Pilot industries shared an interest on renewable energy.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 22. Training materials: Solar thermal energy.

GEOTHERMAL ENERGY				
General aspects	Title	Geothermal energy		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	X
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation.		
	Topic	Characteristics, basic schemes, technologies and design and sizing criteria for geothermal energy installations		
	Length	17 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodo-	Training goal	Present the possibilities for geothermal energy integration in industries and the principles to assess its potential		
	Pedagogical justification	Pilot industries shared an interest on renewable energy.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 23. Training materials: Geothermal energy.

7.1.4 Energy management contents.

HOW TO DO ENERGY AUDITS				
General aspects	Title	How to do energy audits		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	X
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Video + PowerPoint presentation		
	Topic	Principles and benefits from energy audits and needs to plan implementation.		
	Length	8 minute + 24 slides.		
	Language	Video in English with subtitles in English, English, German, Spanish, Italian and French. Presentation in English, German, Spanish, Italian and French.		
Pedagogical and methodological as-	Training goal	To understand the goals and outputs of energy audits and the resources that the auditor team will need.		
	Pedagogical justification	The company needs to understand the energy audit process, the resources to allocate for it and the outputs expected to plan accordingly.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 24. Training material: How to do energy audits.

CHECKLIST RELEVANT INFORMATION				
General aspects	Title	Checklist relevant information		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	X
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Word document		
	Topic	Information to gather for the first steps of an energy audit.		
	Length	3 pages.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	To serve as a guide for the data gathering phase in an audit.		
	Pedagogical justification	Support information for the start of the energy audit.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 25. Training material: Checklist relevant information.

MAIN STEPS OF AN ENERGY AUDIT				
General aspects	Title	Main steps of an energy audit		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	X
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation + 2 Word documents		
	Topic	Development of energy audit: data gathering, fieldwork, energy balance, analysis and energy efficiency measures.		
	Length	50 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	Explanation of the work carried out in an energy audit from the data acquisition to the analysis of energy balances and efficiency measures.		
	Pedagogical justification	Guidelines for the auditor team.		
	Ontological Flip Teaching level	X	At home.	
		X	In class.	
			Suggestion for new material.	

Table 26. Training material: Main steps of an energy audit.

HOW TO PRESENT MEASURES				
General aspects	Title	How to present measures		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	X
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation + Word document (exercises)		
	Topic	Economical evaluation of energy efficiency measures.		
	Length	15 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Present the principles to translate technical data from energy efficiency measures into investment calculations.		
	Pedagogical justification	To facilitate the coordination between the technical team defining the energy efficiency measures and the financial department to allocate funds.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 27. Training material: How to present measures.

DEVELOPMENT OF AN ACTION PLAN			
General aspects	Title	Development of an action plan	
	Place in the repository	AREA	SUBAREA
		Introduction.	Kick-off.
		Energy efficiency.	Energy efficiency.
			Electrical devices.
			Thermal devices.
			Horizontal utilities.
			Buildings.
		Renewable energy.	Renewable energy.
		Energy management.	Audits.
			Energy culture.
			Energy awareness.
			Monitoring.
			Energy contracting.
		Regulation.	Legislation.
			Subsidies.
		Electric vehicle.	Future of the sector.
			Electric vehicle.
Main features	Format	PowerPoint presentation	
	Topic	How to make an action plan from the energy efficiency measures detected in the audit.	
	Length	10 slides.	
	Language	English, German, Spanish, Italian and French.	
Pedagogical and methodological	Training goal	Explain how to prioritize investments and develop a measurable action plan.	
	Pedagogical justification	Ensure that the energy efficiency measures detected in the audit end up forming a cohesive implementation plan.	
	Ontological Flip Teaching level	X	At home.
			In class.
			Suggestion for new material.

Table 28. Training material: Development of an action plan.

MEASUREMENT AND VERIFICATION				
General aspects	Title	Measurement and verification		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	X
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Video + PowerPoint presentation + Word (exercises)		
	Topic	Verification of saving derived from energy efficiency measures		
	Length	8-minute video + 31 slides.		
	Language	Video in English with subtitles in English, German, Spanish, Italian and French. Presentation and word in English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Understanding how to compare results before and after the implementation of energy efficiency measures to verify savings, increase confidence and control potential deviations.		
	Pedagogical justification	To give technical personnel the guidelines to control its processes and measure the impact of their energy saving efforts.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 29. Training material: Measurement and verification.

EN_16247:2015				
General aspects	Title	EN16247:2015		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	X
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation		
	Topic	European Standard for energy audits		
	Length	24 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Providing guidelines to write the audit report and for the steps that take place in the implementation phase after the report is delivered.		
	Pedagogical justification	To give the auditor team the structure of contents expected in the audit report and the principles to translate the audit report into the day-to-day management of energy consumption.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 30. Training material: EN16247:2015.

EMS_ISO 50001				
General aspects	Title	Energy Management System_ISO 50001		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	X
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Video + PowerPoint presentation + Word (exercises)		
	Topic	An overview about the application and potential of an Energy Management System.		
	Length	14-minute video + 32 slides.		
	Language	Video in English with subtitles in English, German, Spanish, Italian and French. Presentation and word in English, German, Spanish, Italian and French..		
Pedagogical and methodological aspects	Training goal	Providing guidelines to write the audit report and for the steps that take place in the implementation phase after the report is delivered.		
	Pedagogical justification	To provide an overview of the application and potential of an energy management system in any type of company, aspects to be considered and the main points that make up the standard.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 31. Training material: EMS_ISO 50001.

EMS_HIGH LEVEL POSITIONS				
General aspects	Title	Energy Management System_High Level Positions		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	X
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Video + PowerPoint presentation		
	Topic	Explanation of the importance and responsibilities of senior management in implementing an energy management system.		
	Length	7-minute video + 20 slides.		
	Language	Video in English with subtitles in English, German, Spanish, Italian and French. Presentation in English, German, Spanish, Italian and French.		
Pedagogical and methodological aspects	Training goal	Generate organizational culture on the involvement and involvement of the company's management and provide means and resources to be able to implement a management system, as well as generate awareness throughout the company through the employees.		
	Pedagogical justification	Useful information for managers and directors		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 32. Training material: EMS_High level positions.

EMS_COMMUNICATION AND COOPERATION				
General aspects	Title	Energy Management System_Communication and cooperation		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	X
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Video + PowerPoint presentation		
	Topic	Communication strategies within a company to create an energy culture.		
	Length	7-minute video + 20 slides.		
	Language	Video in English with subtitles in English, German, Spanish, Italian and French. Presentation in English, German, Spanish, Italian and French.		
Pedagogical and methodological as-	Training goal	Explanation of the importance of the communication strategies within a company to create an energy culture and based on the communication and cooperation required by ISO 50001.		
	Pedagogical justification	Useful information for managers and directors		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 33. Training material: EMS_Communication and cooperation.

EMS_TARGETS AND GOALS				
General aspects	Title	Energy Management System_Targets and goals		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	X
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Video + PowerPoint presentation		
	Topic	To identify the energy objectives of a company from the strategic and tactical level.		
	Length	7-minute video + 24 slides.		
	Language	Video in English with subtitles in English, German, Spanish, Italian and French. Presentation in English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	See the possible origins of the actions to be carried out in a company to improve its energy performance and how to evaluate and prioritize them.		
	Pedagogical justification	Useful information for managers and directors		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 34. Training material: EMS_Targets and goals.

GENERAL EMPLOYEES - MOTIVATION				
General aspects	Title	General employees - Motivation		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	X
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation		
	Topic	Motivation techniques for employees.		
	Length	10 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	To motivate employees for a better energy behaviors.		
	Pedagogical justification	Useful information for managers and directors		
	Ontological Flip Teaching level	X	At home.	
		X	In class.	
			Suggestion for new material.	

Table 35. Training materials: General employees - Motivation.

AWARENESS IN ENERGY EFFICIENCY				
General aspects	Title	Awareness in Energy Efficiency		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	X
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	PowerPoint presentation		
	Topic	General ideas to increase the awareness of employees.		
	Length	22 slides.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	Motivation strategies to involve employees in energy efficiency and general ideas on how to do energy efficiency daily.		
	Pedagogical justification	Useful information for managers and directors		
	Ontological Flip Teaching level		At home.	
		X	In class.	
			Suggestion for new material.	

Table 36. Training material: Awareness in Energy Efficiency.

ROLE PLAY REWARDING SUGGESTIONS				
General aspects	Title	Role Play Rewarding suggestions		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	X
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Word document		
	Topic	Exercises for increasing the awareness of the trainees.		
	Length	9 pages.		
	Language	English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	These two exercises are interesting in order to assess what the company considers important and how to change the awareness of the trainees.		
	Pedagogical justification	Useful information for all trainees.		
	Ontological Flip Teaching level		At home.	
		X	In class.	
			Suggestion for new material.	

Table 37. Training material: Role play rewarding suggestions.

MONITORING AND BENCHMARKING				
General aspects	Title	Monitoring and Benchmarking		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	X
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Video + PowerPoint presentation		
	Topic	To explain how the monitoring system works.		
	Length	7-minute video + 24 slides.		
	Language	Video in English with subtitles in English, German, Spanish, Italian and French. Presentation in English, German, Spanish, Italian and French.		
Pedagogical and methodological	Training goal	To provide companies how a monitoring system works and why it is important to be aware about the consumptions in the facilities.		
	Pedagogical justification	Useful information for managers and directors		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 38. Training material: Monitoring and benchmarking.

ENERGY CONTRACTING - GERMANY				
General aspects	Title	Energy contracting - Germany.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	X
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	1 Word document in German language		
	Topic	Description of energy contracting in Germany.		
	Length	20 pages.		
	Language	German.		
Pedagogical and methodological aspects	Training goal	To inform German trainees about methods to implement energy saving measures by using energy contracting.		
	Pedagogical justification	There is a lack of knowledge in most industrial companies implementing energy saving measures without own investments using energy contracting offered by energy contractors		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 39. Training material: Energy contracting in Germany.

ENERGY CONTRACTING - SPAIN				
General aspects	Title	Energy contracting - Spain.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	X
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	2 Word documents in Spanish language		
	Topic	Presentation of the Spanish Energy Market.		
	Length	44 pages.		
	Language	Spanish.		
Pedagogical and methodological aspects	Training goal	To inform Spain trainees about the way the electricity and natural gas markets work in Spain and its regulation.		
	Pedagogical justification	It's important that managers and key figure of a company involved in the process of energy purchasing are aware of the rules underlying the energy market.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 40. Training material: Energy contracting in Spain.

ELECTRICITY SUPPLY CONTRACTING IN FRANCE				
General aspects	Title	Electricity supply contracting in France		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	X
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Word document in French		
	Topic	General presentation of the distribution of electricity and the composition of an electricity price		
	Length	24 pages		
	Language	French		
Pedagogical and methodological	Training goal	To transfer trainees bases knowledge about electric contracting energy		
	Pedagogical justification	To be familiar with the components of an electricity price and to know the levers to control costs.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 41. Training material: Electricity supply contracting in France.

GAS SUPPLY CONTRACTING IN FRANCE				
General aspects	Title	Gas supply contracting in France		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	X
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Word document in France		
	Topic	General presentation of the distribution of gas and the composition of a gas price		
	Length	18 pages		
	Language	French.		
Pedagogical and methodo-	Training goal	To transfer trainees' bases knowledge about gas contracting energy		
	Pedagogical justification	To be familiar with the components of a gas price and to know the levers to control costs.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 42. Training material: Gas supply contracting in France.

ENERGY CONTRACTING - ITALY				
General aspects	Title	Energy contracting - Italy.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	X
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	1 Word document in Italian language		
	Topic	Presentation of the Italian Energy Market.		
	Length	22 pages.		
	Language	Italian.		
Pedagogical and methodological aspects	Training goal	To inform Italian trainees about the way the energy market works in Italy and its regulation.		
	Pedagogical justification	It's important that managers and key figure of a company involved in the process of energy purchasing are aware of the rules underlying the energy market.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 43. Training material: Energy contracting in Italy.

7.1.5 Regulation contents.

LEGISLATION - GERMANY				
General aspects	Title	Legislation - Germany.		
		AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	X
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	1 Word document in German language		
	Topic	Presentation of the German legislation about energy within industries and companies.		
	Length	17 pages.		
	Language	German		
Pedagogical and methodological	Training goal	To inform German trainees about the main German laws related to the use of energy within industries and companies.		
	Pedagogical justification	Within companies there is a general lack of knowledge about laws related to the use of energy, how to comply with them and how they can provide competitive benefits.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 44. Training material: Legislation in Germany.

LEGISLATION - SPAIN				
General aspects	Title	Legislation - Spain.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	X
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	1 Word document in Spanish language		
	Topic	Presentation of the Spanish legislation about energy within industries and companies.		
	Length	14 pages.		
	Language	Spanish		
Pedagogical and methodological	Training goal	To inform Spanish trainees about the main Spanish laws related to the use of energy within industries and companies.		
	Pedagogical justification	Within companies there is a general lack of knowledge about laws to comply with that, even if not mandatory, can provide competitive benefits.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 45. Training material: Legislation in Spain.

LEGISLATION - FRANCE				
General aspects	Title	Legislation in France		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	X
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	Word document		
	Topic	This document presents the entire regulatory and para-regulatory field applicable in France on energy and environmental performance.		
	Length	15 pages		
	Language	French.		
Pedagogical and methodological aspects	Training goal	To transfer to the trainees the knowledge of the regulatory texts applicable to their activity.		
	Pedagogical justification	Allow its user to: - To find his way in the architecture of the texts - To be able to search for the texts that are necessary for his activity.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 46. Training material: Legislation in France.

LEGISLATION - ITALY				
General aspects	Title	Legislation - Italy.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	X
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	1 Word document in Italian language		
	Topic	Presentation of the Italian legislation about energy within industries and companies.		
	Length	24 pages.		
	Language	Italian		
Pedagogical and methodological as-	Training goal	To inform Italian trainees about the main European and Italian laws, International standards, related to the use of energy within industries and companies.		
	Pedagogical justification	Within companies there is a general lack of knowledge about laws to comply with and international standards that, even if not mandatory, can provide competitive benefits.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 47. Training material: Legislation in Italy.

SUBSIDIES - GERMANY				
General aspects	Title	Subsidies - Germany.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	X
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	1 Word document in German language		
	Topic	Presentation of subsidy programs for energy efficiency measures available for German companies.		
	Length	pages.		
	Language	German.		
Pedagogical and methodological as-	Training goal	To inform German trainees about the main available subsidies for energy efficiency measures.		
	Pedagogical justification	Within companies there is a general lack of knowledge about subsidies, which can be used to reduce investments necessary to implement energy efficiency measures.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 48. Training materials: Subsidies in Germany.

SUBSIDIES - SPAIN				
General aspects	Title	Subsidies - Spain.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	X
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	1 Word document in Spanish language		
	Topic	Presentation of subsidy programs for energy efficiency measures available for Spanish companies.		
	Length	7 pages.		
	Language	Spanish.		
Pedagogical and methodological as-	Training goal	To inform Spanish trainees about the main available subsidies for energy efficiency measures.		
	Pedagogical justification	Within companies there is a general lack of knowledge about financial mechanisms allowing to reduce costs of the implementation of energy efficiency measures.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 49. Training material: Subsidies in Spanish.

SUBSIDIES - FRANCE				
General aspects	Title	Financial subsidies for SMEs/SMIs in France		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
Main features	Format	Word document in French		
	Topic	Presentation of the support systems available in France for SMEs and SMIs		
	Length	8 pages		
	Language	French		
Pedagogical and methodological	Training goal	Identify potential sources of financial assistance and know how to benefit from it		
	Pedagogical justification	Financial aid is a facilitating and determining factor in the implementation of energy-saving measures in a company.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 50. Financial subsidies in France.

SUBSIDIES - ITALY				
General aspects	Title	Subsidies - Italy.		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	X
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	
Main features	Format	1 Word document in Italian language		
	Topic	Presentation of subsidies and measures of tax deductions for energy efficiency measures available for Italian companies.		
	Length	24 pages.		
	Language	Italian		
Pedagogical and methodological as-	Training goal	To inform Italian trainees about the main available subsidies and measures of tax deductions for energy efficiency measures.		
	Pedagogical justification	Within companies there is a general lack of knowledge about financial mechanisms allowing to reduce costs of the implementation of energy efficiency measures.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 51. Training material: Subsidies in Italy.

7.1.6 Electric vehicle contents.

GENERAL APPROACH: ELECTRIC VEHICLES			
General aspects	Title	General approach: Electric vehicles.	
	Place in the repository	AREA	SUBAREA
		Introduction.	Kick-off.
		Energy efficiency.	Energy efficiency.
			Electrical devices.
			Thermal devices.
			Horizontal utilities.
			Buildings.
		Renewable energy.	Renewable energy.
		Energy management.	Audits.
			Energy culture.
			Energy awareness.
			Monitoring.
			Energy contracting.
Main features	Format	1 Word.	
	Topic	Explanation of the main characteristics of the electric vehicles, trying to provide a general view of this technology.	
	Length	30 pages.	
	Language	English, German, Spanish, French and Italian.	
Pedagogical and methodological aspects	Training goal	To inform automotive sector's SMEs which are the features of the electric vehicles in order to make them aware of the possibilities that this technology has.	
	Pedagogical justification	Taking into account the expected evolution of the automotive sector during the next decades through a progressive electrification, it is needed that automotive sector's companies know these technologies.	
	Ontological Flip Teaching level	X	At home.
			In class.
			Suggestion for new material.
			X

Table 52. Training material: General approach: Electric vehicles.

OPERATION AND PARTS OF THE ELECTRIC VEHICLES				
General aspects	Title	Operation and parts of the electric vehicles		
	Place in the repository	AREA	SUBAREA	
		Introduction.	Kick-off.	
		Energy efficiency.	Energy efficiency.	
			Electrical devices.	
			Thermal devices.	
			Horizontal utilities.	
			Buildings.	
		Renewable energy.	Renewable energy.	
		Energy management.	Audits.	
			Energy culture.	
			Energy awareness.	
			Monitoring.	
			Energy contracting.	
		Regulation.	Legislation.	
			Subsidies.	
		Electric vehicle.	Future of the sector.	
			Electric vehicle.	X
Main features	Format	1 Word.		
	Topic	Explanation of the parts that compose an electric vehicle.		
	Length	29 pages.		
	Language	English, German, Spanish, French and Italian.		
Pedagogical and methodological aspects	Training goal	To inform automotive sector's SMEs which are the parts of the electric vehicles in order to achieve a better knowledge for their part in this respect.		
	Pedagogical justification	Knowing the main parts of the electric vehicles, automotive sector's companies could be aware of potential reconversions of their industrial processes.		
	Ontological Flip Teaching level	X	At home.	
			In class.	
			Suggestion for new material.	

Table 53. Training material: Operation and parts of the electric vehicles.