

TOWARDS A SUSTAINABLE AGRO-FOOD INDUSTRY. CAPACITY BUILDING PROGRAMMES IN ENERGY EFFICIENCY.







Info about INDUCE project

- Acronym: INDUCE
- Title: Towards a sustainable agro-food INDUstry: Capacity building programmes in Energy efficiency
- Duration: 30 months (01/02/2018 31/07/2020)
- Topic: EE-15-2017
- Proposal: H2020-EE-2017-CSA-PPI
- Funding: CSA Coordination and support action
- ✓ Budget: 1.997.191,25 €
- ✓ Consortium

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Towards a Sustainable Agro-Food Industry. Capacity Building Programmes in Energy Efficiency.

The INDUCE project has delivered a methodology for the implementation of capacity building programmes in energy efficiency based on a Human-Centered Design approach, leading to the ad-hoc design of training courses and interventions that align the motivation of involved actors with an energy efficiency culture.





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INDUCE project

Open Access Platform

The INDUCE project developed an open access platform (INDUCE toolkit) where training material, online lessons, guidelines and tools are available for companies aiming to increase their energy efficiency.



Knowledge Transfer

The INDUCE methodology linked knowledge transfer on energy efficiency with behavioural and organisational change models, so an energy culture and an environment conducive for change are established in the company.

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Testing & Validating

The INDUCE methodology and toolkit were tested and validated in 15 pilot companies from the food and beverage sector in four countries that represent over 45% of the EU companies in this diverse sector.



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INDUCE Project Background



Open Access Platform

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INDUCE Project Knoweledge

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Knowledge Transfer

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INDUCE Project Toolkit



Testing & Validating

The INDUCE methodology and toolkit were tested and validated in 15 pilot companies from the food and beverage sector in four countries that represent over 45% of the EU companies in this diverse sector.





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Goal 4: To unlock the implementation of more than 400 measures on energy D, efficiency, leveraging a potential for energy savings up to 106 GWh/year through the provision of ad-hoc recommendations and behaviour change. 4 5















Goal 7:

To make available the capacity building programmes and other results developed in the project through INDUCE platform and by the definition of business plans adapted to the products and partners of the consortium.



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INDUCE Project Approach

INDUCE TOOLKIT



Repository: Training material, Capacity building programme format, Detailed INDUCE methodology, Documentation for trainees, Newsletters, Event announcements, Artides, Brochures, Reports, Guidelines on INDUCE methodology.

Modules: Database, Surveys, Online lessons, INDUCE tools, List of interventions EE measures inbox.



Repository: Documentation for trainees, Newsletters, Event announcements, Artides, Brochures, Reports, Guidelines on INDUCE methodology.

Modules: Online lessons, INDUCE tools, List of interventions EE measures inbox.





Repository: Newsletters, Event announcements, Artides, Brochures, Reports, Guidelines on INDUCE methodology.

Modules: INDUCE tools, List of interventions.



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60 trainers

300 companies

5.100 employees

4 Networks

>15.000 companies 100.000 stakeholders Community of trainers

DISSEMINATION & EXPLOITATION

4 Network Organizations (FIAB, FNLI, FPI, SCDF) and INDUCE community of trainers will disseminate and exploit the project results after the project's end reaching an audience of 100.000 people and more than 15.000 companies.

REPLICATION

60 experts will be trained for free in INDUCE capacity building programme in exchange for a commitment of implementing it in at least 5 companies each. A preliminary list of companies willing to implement this programme will be provided by INDUCE Network Organizations.

pilot companies
 employees

VALIDATION

15 Pilot Companies will be in close contact with the consortium partners in order to provide them with their needs, expectations and opinions. They will be the first companies in which the designed training courses and interventions will be tested for their fine tune and later replication engaging a total of 255 employees.

PROJECT KICK OFF

At the kick off meeting, INDUCE will count with 10 partners and 12 letters of support, representing a experienced and solid base for the project execution. In addition, the consortium will be in close contact with the most relevant stakeholders in order to engage them from the start of the project, obtain their feedback and set the basis for the replication of INDUCE methodology.



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The INDUCE Methodology was looking for the implementation of capacity building programmes in energy efficiency based on a Human-Centered Design approach, leading to the ad-hoc design of training courses and interventions that align the motivation of involved actors with an energy efficiency culture.







Phase I Inspiration

Phase II Ideation

Phase III Implementation

Phase IV Monitoring

		 Contact with Company Company Assessment: Energy Scan – Interviews – Culture Scan → understanding company needs → training suggestions
	\checkmark	•Co-creation sessions based on outcomes of the company assessment and training suggestions
		- Co-creation sessions based on outcomes of the company assessment and training suggestions
	V	•Decide on training contents, target groups and objectives together with company management
	\bigvee	Select resources from INDUCE repository (in combination with own experience)
		•Assemble tailor-made training course according to results from co-creation sessions.
	$\mathbf{\vee}$	•Provide training to company
-		
		•Evaluate outcomes

Agree on follow-up activities with company



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PHASE I – INSPIRATION



Human Centered Design steps in INDUCE according to the number of training ideas



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People Develop an energy efficiency culture

Organisational Management commitment, resources and planning

Technical Understanding your energy use and how to control it

Pillars for effective capacity building training

CAPACITY BUILDING PROGRAM



Some material available on IDUCE platform to create the training

	Units	REP	OSITORY				
NAME	DESCRIPTION						
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Top management "commitment" and analysis GAP to Energy Management.	CATEGORIES					ntial to builds	
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PHASE III – IMPLEMENTATION



Testing location inside training execution and INDUCE Methodology



LESSON STUDY APPROACH

"Lesson study is a translation of the Japanese term, "jugyou kenkyuu," where "jugyou" means "live instruction" and "kenkyuu" means "research" or "study" (Isoda, Stephens, Ohara, & Miyakawa, 2007). At its origin, lesson study is a Japanese practice where teachers conduct a systematic inquiry into their pedagogical practice by closely examining a lesson and its delivery. (Fernandez, 2002)" (Beblo Hiles, 2018, pp. 6-7)





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INDUCE Pilots Companies





Direct impacts during INDUCE execution

INDUCE

Induced impacts towards 2030







17,4 Million €/year of savings achieved by implementing INDUCE methodology.

26,5 Million € of investments

triggered by the project execution.

About **540 Million €/year** of savings achieved by replicating INDUCE results

Direct impacts during INDUCE execution

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Induced impacts towards 2030

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ENVIROMENTAL

13,5 ktCO₂/year emissions avoided

due to energy savings at the agro-food companies.

More than 1.500 ktCO₂/year emissions avoided

Direct impacts during INDUCE execution

Induced impacts towards 2030



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Direct impacts during INDUCE execution

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Induced impacts towards 2030



INDUCE Platform & Toolkit

www.energyefficientfoodindustry.eu/

Resources

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Documents

✓ Projects

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Energy Efficiency tools

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Energy Effciency measures \checkmark



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ENERGY

Assuming the replication companies will perform in a similar way as the pilot companies and each replication company will also unlock 1.6 measures in average this would lead to a total number of 490 measures on energy efficiency unlocked in the pilot and

replication companies (315). This would mean that the INDUCE

trainings enabled the companies to unlock 22 %

more measures as originally envisaged.



Energy savings The aim of the project was to save 106 GWh/year of primary energy. Assuming 315 companies would tap the same energy savings as observed in the pilot companies, the INDUCE project would achieve 554 GWh/year, which is almost 5.2 times higher than the project goal



Energy

savings

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ACHIEVED

EXPECTED

17,4 Million €/year of savings achieved by implementing INDUCE methodology

26,5 Million € of investments triggered by the project execution





20 Million €/year of savings achieved by implementing INDUCE methodology

21.6 Million € of investments

triggered by the project execution



According to the energy price assumption, it is expected that the INDUCE methodology applied on 315 companies of the F&B sector would lead to yearly savings of 20 Mio €/year, 15% above the project goal. Based on EU average prices, the energy cost savings would be 8% below the project target (16 Mio €/year).

ECONOMIC

The aim of the project was to trigger 26.5 Mio. € of investments. For this indicator, the project is 17% below this target. This result might be explained by the fact that a large share of energy savings was achieved through organizational measures which normally do not require expensive physical investments.



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EXPECTED

ACHIEVED

ENVIROMENTAL



due to energy savings at the agro-food companies

95 ktCO2/year emissions avoided

due to energy savings at the agro-food companies

The aim of the project was to avoid 13.5 ktCO2/year. Assuming 315 companies would tap the same energy savings as observed in the pilot companies, the INDUCE methodology would contribute to GHG reductions of 95 ktCO2/year, 7 times above the project goal. Based on specific emission of the EU electricity mix, the emission reductions would be even 7.7 higher than those of the project target.



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