



**A sectorial approach to benchmarking  
and Energy Efficiency best practices towards SMEs:  
the EM2M experience in Italy**

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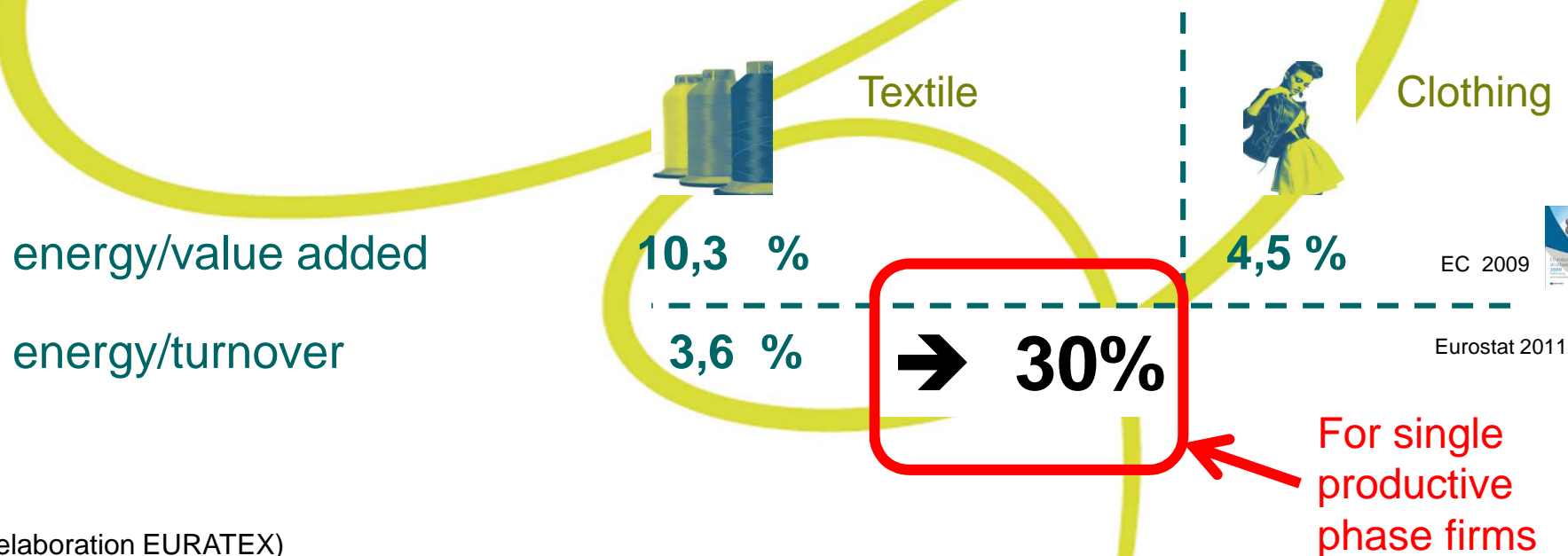


# summary

- **EM2M European campaign**
- The SET approach
- Lesson learnt and results

# Energy as a COST for the TC sector

## Why Energy Efficiency is relevant for the TC sector?



(elaboration EURATEX)



# EM2M: an info campaign across Europe 2014- 2016

February 2014 **EURATEX** launches **Energy Made-to-Measure (EM2M)** in collaboration with dozens of EU organizations

EM2M is a multiannual information campaign bringing tools, best practices and training at the doorsteps of textile & clothing companies

EM2M's goal is to help several hundreds of managers to **assess options and take informed decisions** to launch energy efficiency measures.



*Where is energy used in my company?  
where is it lost?  
when and why?  
what are the options ?  
how long to repay the investment?  
what do others do?  
what are the benchmarks?*



# EM2M: some figures

EM2M **brings together and promotes results** of key initiatives

EM2M achieves critical mass helping companies all over EU to get results

EM2M relays on initiatives' own budgets, extends projects' lifetime and range

EM2M aims to share results and best practices and to quantify benefits

## 2014 facts (9 months)

-  **8** countries
-  **21** meetings
-  **500+** professionals met
-  **1** **Linked in** group
-  **0 €** additional costs

**3** projects



**2015 new MoU**



SET - Save Energy in Textile SMEs is a project of EM2M addressing Textile industry



# what SESEC did?

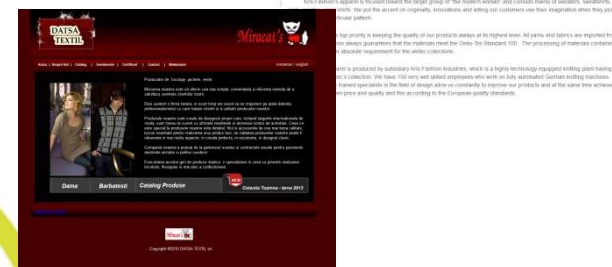
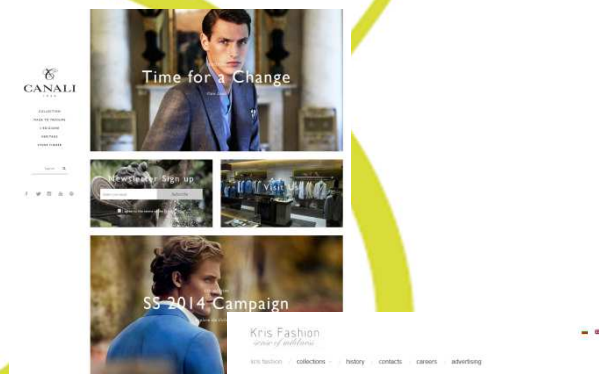
- The **Italian** company **CANALI spa** has been able to identify opportunities to optimize its thermal and electric consumption.

cumulative direct savings of up to 7.650.000 KWht/year has been estimated for Italian firms

- In **Bulgaria**, thanks to SESEC, the producer **Kris Fashion** has identified a potential saving of 10-15% in its annual energy consumption.

- The **Romanian** company **SC Datsa Textil SRL** has identified a series of actions which have already saved an average of 20% of the electricity costs.

- The **Portuguese** company **DAMEL** identified savings in lighting, variable speed in production machine and insulation for up to 5% of their electricity consumption and for up to 3% in the consumption of thermal energy.



Estimated total energy saving between 462 Toe and 849 Toe with Portuguese companies

# what SET does ?

Energy Efficiency Rating	
(92 to 100)	<b>A</b>
(81 to 91)	<b>B</b>
(69 to 80)	<b>C</b>
(55 to 68)	<b>D</b>
(39 to 54)	<b>E</b>
(21 to 38)	<b>F</b>
(1 to 20)	<b>G</b>

Creates and deploys a unique **Energy Saving and Efficiency Tool (ESET)** for SMEs of the European textile industry

**enables energy efficiency for 150 companies**

by  
applying the ESET with 50 companies,  
training and assist further 100 companies

unlocks energy saving potential for **further 350 companies**

Joins the **Energy Made-to-Measure (EM2M) campaign**

**Develops the third generation of the  
EE SAVING SCHEME (and Tools) of EM2M**



# EM2M: key concepts

- EM2M focus on Energy Efficiency through
  - behaviours and operations change/optimisation
  - auxiliary systems optimisation
  - cross-cutting best practices
- EM2M keywords
  - Energy uses awareness
  - Energy as a resource and cost to be managed
  - Best practices fostering
  - (Focus on) SMEs



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# The SET approach: starting point

- Fragmented sector and mono-phase firms
- Poor capacity of investment and lack of internal EE skills
- Difficulty in establishing valid benchmarks for plants with a specific technology
- Different priorities in different countries
- Create awareness and motivate to invest time and resources on Energy Efficiency (not substituting Energy Audits and ESCOs role)

Thus

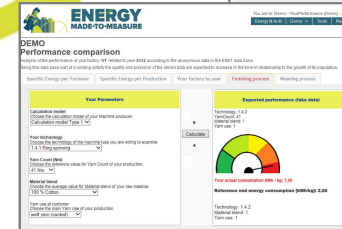
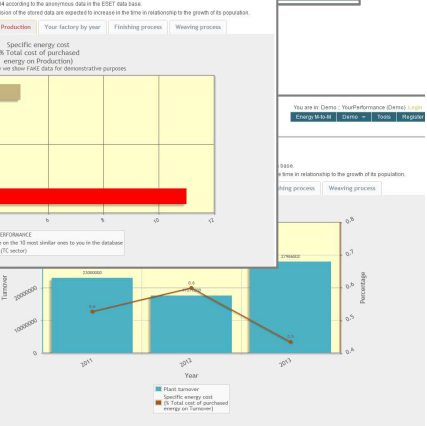
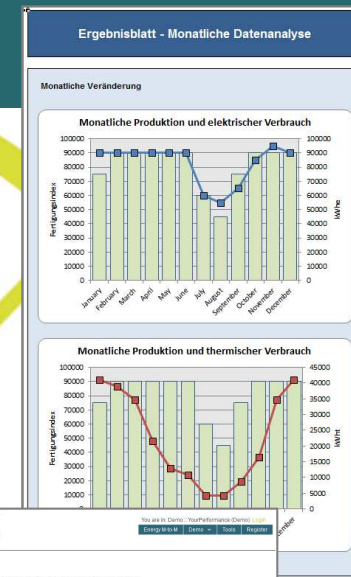
- achieve better awareness of energy uses and measures in the company

but also

- to collect structured data (for example to prepare an audit)
- to evaluate own performances against similar factories

# The ESET Tool

- A stand alone TOOL to collect and analyse data from the plant
- A web application to COMPARE performance against benchmarks
- Web models to foresee consumption for different process technology
- A dynamic benchmark database based on a community approach



# Fostering best practices

220 Best Practices (140 sector specific and 80 cross-cutting) with their logic and categorised by

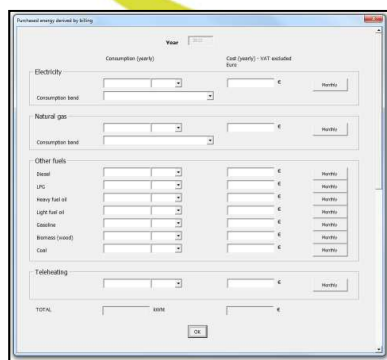
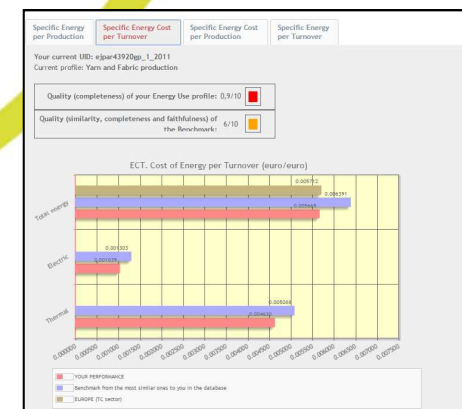
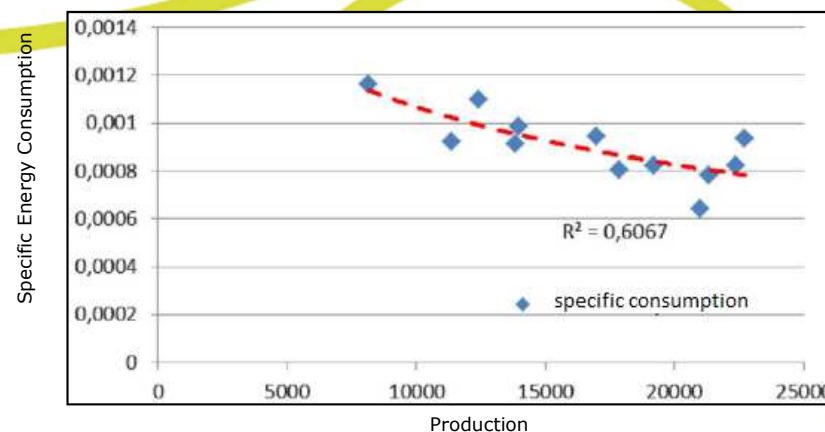
- **Category:** Organization, Process, Building , Building organization, Service fluids, Energy production
- **Cost:** null, medium, high, ...
- **Involved uses:** Heating / Air Conditioning Plant, Illumination plant , Large-scale electric equipment, ...
- **Effects on consumptions:** Reduction of electric consumption, Reduction of combustible consumption for thermal use ...
- **Savings:** Low , Low/Medium, 'variable, 6-7% per each bar reduced ', 'up to 15%'...
- **Pay back:** immediate, short, medium, ..

# A lot of suggestions from few data

ESET has a two step approach: yearly data and monthly data

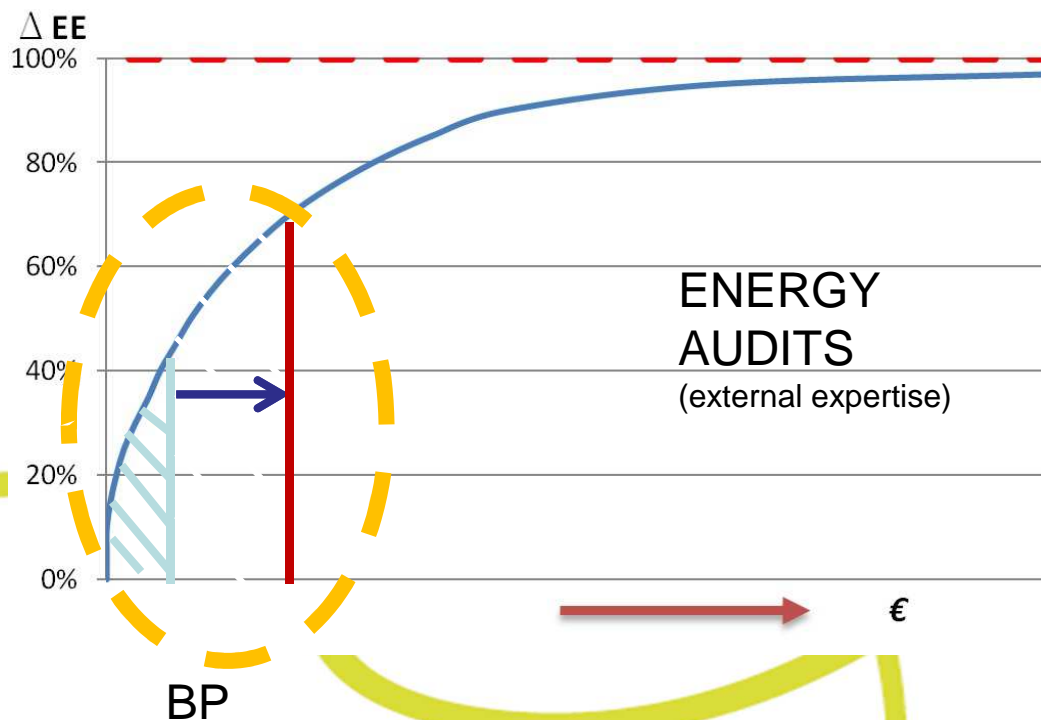
ESET provides energy consumption and cost indicators compared to benchmarks for each kind of production:

- consumption and cost / turnover (Eurostat references by Nation)
- energy consumptions distributed by source
- specific consumption vs production (regression analysis)
- monitoring of energy indicators by continuing to use the tool month by month and checking evolutions

# EE improvement vs costs

**ESES Scheme domain (empower self assessment capability)**



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# Some figures

Analysis of really SUGGESTED BPs in a sample of 22 firms visited in Italy

BP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
LED	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Proximity sensors	█	█	█	█	█	█	█	█	█											
Correction Power Unit	█	█																		
Dimmer	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Photov	█	█	█	█																
Heat recovery	█	█	█	█	█	█	█	█	█	█	█									
Cogeneration	█	█	█	█	█	█	█													
Compr. Air	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█			
EI.Engines	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Building insulation	█	█	█	█	█	█														
Pipe insul.	█	█	█	█	█															
Ventilation	█	█	█	█																
Partitioning	█																			
Loads re-scheduling	█																			



# Underevaluation of auxiliary systems

- **Compressed air causes a cost that is not always taken in account, ... but it accounts!**



In a case

costs due to compressed  
air losses  
were estimated  
between  
50K and 80KEuro per year

# What is changing

Our activities begun 3 years ago...due to new normatives and market evolution things are changing:

- Inverters are a common choice, but not always effective
- Cogeneration efficiency depends on the policy: now it requires optimising thermal component rather than the electrical one
- New value for the district dimension: exceeding self production nearby to users becomes convenient (only Italian normatives)

# Some conclusions

- Often companies do NOT exactly KNOW their energy related data
- Quantifying the loss of money is a starting point to be aware of an EE problem/opportunity
- Companies ask primarily help for identifying the areas WHERE to focus
- Check lists of BPs helps to become aware of EE problems and of possible solutions
- Often companies has bought renewable sources rather than doing efficiency
- The mix of most promising BPs changes in different countries
- After a promising (but costly) EE action is clearly identified the IMPLEMENTATION is not automatic in the decision internal process
  
- Thanks to the company contribution we are setting up a consistent data base with anonymous data about consumption in relationship with technologies and productive processes.

# BYE!

Many thanks for your attention!

EM2M: [www.euratex.eu/em2m](http://www.euratex.eu/em2m)

SESEC project: [www.euratex.eu/sesec](http://www.euratex.eu/sesec)

SET Project: [www.euratex.eu/set](http://www.euratex.eu/set)

ESET WEB Tool: [www.em2m.enea.it](http://www.em2m.enea.it)