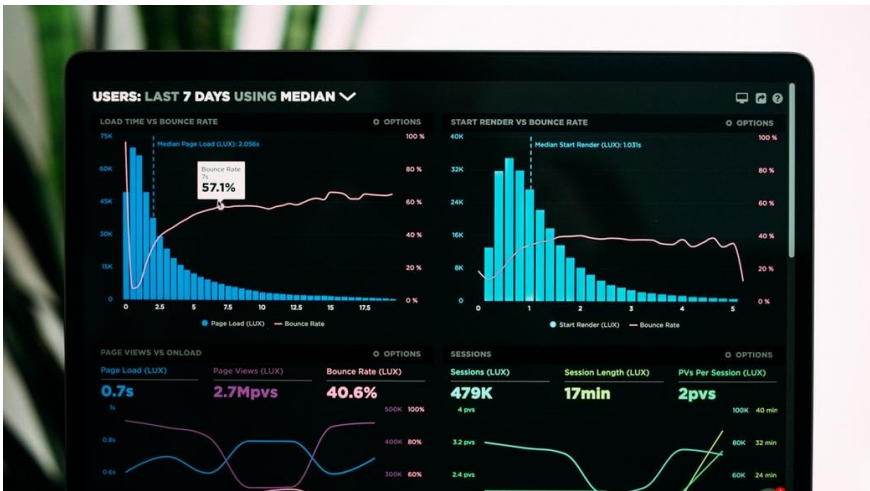


BEST PRACTICES – MONITORING AND CONTROL FACTSHEET



‘Watching the savings’

Italy
Dairy industry

TRL 9

Implementability: 99%

Smart monitoring

The dairy considered for this example implements an energy management system, for which in general the measurement and processing of energy-related data is crucial. A computer program that collects all energy and production flows and evaluates the data seems to be most appropriate for this task. First, the already existing data points are merged in this program. In addition, the installation of further measuring devices is necessary, to ensure that all relevant energy flows can be recorded. Based on the data analysis, the improvement of the energy-related performance can be monitored, and new measures can be derived.

The measure of implementing the data processing program also has the significant advantage that production can be monitored more effectively. It is also beneficial for a quality or environmental management system. Through better knowledge of the production procedures, processes can be optimally coordinated, and the productivity of the factory can be increased.

Description

The data software represents the interface of all information flows concerning energy-related performance. The existing data collection from measurement data concerning energy flows and production quantities is integrated into the new smart system and converted into a consistent format.

In accordance with the energy management, key performance indicators (KPI) are automatically evaluated, displayed and visualized together with relevant parameters.

The system allows the various user groups to view the production process at any time. For example, malfunctions are immediately visible and corresponding personnel are automatically informed. In this way,

the causes of an unexpected increase can be found and eliminated quickly.

What is the improvement focus?

As an essential part of energy management, smart monitoring significantly promotes the intended continuous improvement process with regard to energy-related performance. This covers all kinds of energy sources. The analysis of the

Main NEBs (other benefits)
Quality assurance
Energy management
Time saving
Production increase
Predictive maintenance

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KPIs can be automatically performed with the help of this software.

Benefits

In addition to the advantages for the EMS, smart monitoring can also be of significant benefit for a quality or environmental management systems (ISO 9001 and ISO 140001). As soon as the software is completely implemented, it represents a great time saving due to the automated evaluation. The results of the software are very useful for the documentation of the EMS. The data can also be accessed remotely.

In addition, the ideal maintenance cycles can be calculated through this

data evaluation. This makes it possible to schedule maintenance and reduce unexpected malfunctions, which results in cost savings. A further advantage is the extension option to include load management.

With regard to the cold chain, the monitoring system can make a significant contribution to quality assurance, as interruptions in the cold chain can also be noticed immediately and remedied as quickly as possible. This reduces production waste, thus increasing the efficiency of the dairy operation.

Opportunities and barriers to implementation

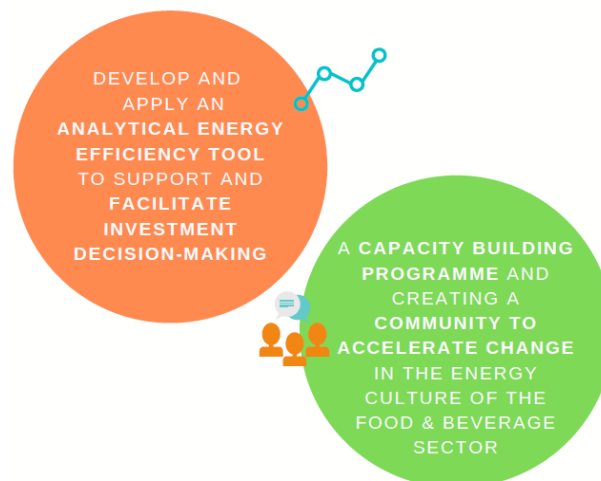
Opportunities	Barriers
Smart monitoring contributes to energy management certification, which may grant tax benefits	Additional cost for software
Production increase	Additional cost for hardware
Predictive maintenance	Staff training required
Available worldwide	
Simple handling	
Saves all kinds of energy sources	

About ICCEE

The project ICCEE, www.iccee.eu, funded by the EU programme Horizon 2020, aims at improving energy efficiency in the cold chain of the food & beverage sector and making it easier for the sector to:

- undertake energy efficiency measures across the entire supply chain and
- accelerate the implementation of energy audit results.

ICCEE follows a holistic approach that moves from a single company perspective to the assessment of the entire cold supply chain. Existing financing schemes for SMEs will be assessed: the optimal ones will support the implementation of energy efficiency measures. ICCEE objectives build on 2 pillars:



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