



SIEMENS

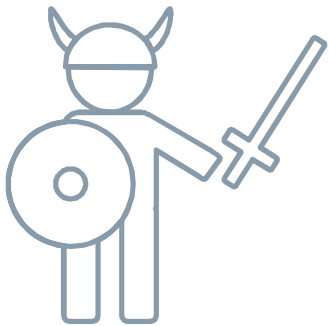


Proving the sustainability of your enterprise

A certified energy management system gives you a competitive edge and boosts your green image through ISO 50001 | July 2015

Global challenges for all industrial players

Competition



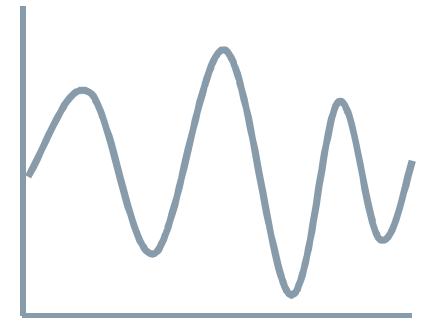
Compliance



Cost pressure



Change



Specific challenges for industrial energy management



- Energy consumption makes up 30 percent of a building's life cycle costs
- An energy management system helps to
 - Identify energy saving potentials
 - Reduce CO₂ emissions
 - Document your energy awareness
 - Boost your green image



An efficient and successful company needs continuous improvement in energy performance!

Why ISO 50001?

- An ISO 50001-certified energy management system supports a systematic evaluation of energy consumption and the ongoing improvement of your energy efficiency by using reproducible key performance indicators
- It's a prerequisite for obtaining funding and saving on tax in the European Union according to the special equalization scheme (§ 41 EEG 2012)

→ Example Germany

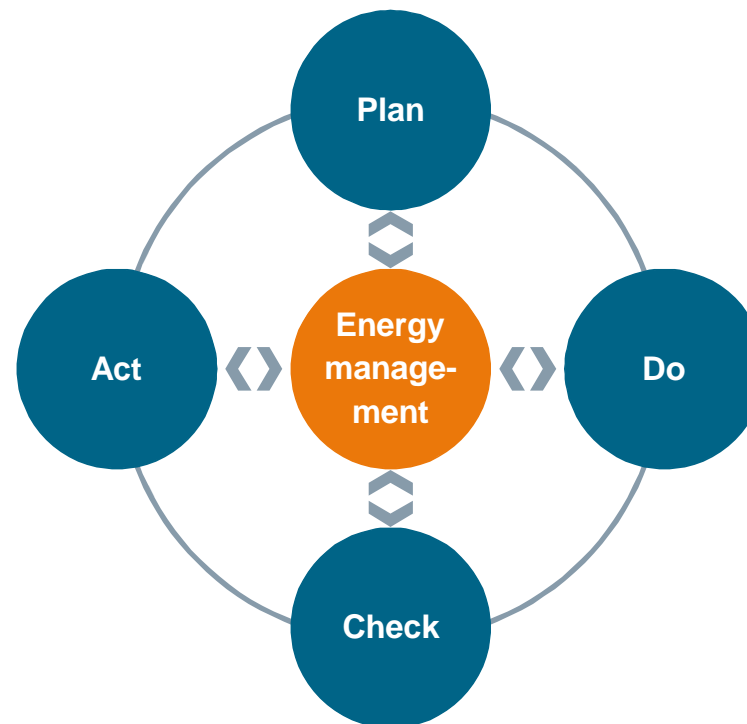
As of 2013, companies have to prove that they are systematically conserving energy

Energy management according to ISO 50001

A proven structure for energy management

Energy management system

Set of interrelated or interacting elements to establish an energy policy and energy objectives, and processes and procedures to achieve those objectives



Plan

Define energy performance indicators, objectives, targets and action plans

Do

Implement the plans

Check

Monitor and measure the success and report the results

Act

Take actions to continually improve energy performance

Source: DIN EN ISO 50001

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Energy management services

An enabler for energy management excellence

| | Analysis | Concept | Implementation | Sustainability |
|--------------|--------------------------|------------------------------------|--|-------------------------------------|
| Awareness | Management workshop | Introduce energy management system | Support for energy management system certification (ISO 50001) | Annual reevaluation |
| Transparency | Data transparency review | Develop data gathering concept | Implement an energy data management system | Continuous data analysis by experts |
| Efficiency | Technical energy audit | Detailed analysis and design study | Implement technical optimization measures | Maintain for savings endurance |

The solution to your challenges

ISO 50001 certification process

Status analysis

Energy management documentation

Energy report and action plan

Training

Internal audit

Audit and certification

Maintenance of energy management system

Assessment

Implementation

Maintain

Step 1 Status analysis

Structure

ISO 50001 requirements
(continual improvement
of energy performance)



Status quo of the company
(input to an energy
management system)



Definition of tasks
(guideline for implementation)



Approach

- Define ISO 50001 scope
- Define the steps for implementation
- Determine potential alignment with other management systems (e.g. quality management)

- Estimate savings potential (incl. tax benefit)
- Review implemented management systems
- Internal processes and responsibilities
- Identification of improvement potentials

- Necessary documentation
- Time schedule
- Distribution of tasks

Step 2 Energy management documentation

Energy management handbook

- Documentation of scope
- Description of energy policy, energy objectives and general approach

Instructions and checklists

- Documentation of necessary structures, processes and work flows to fulfill the energy objectives
- Definition of tasks and responsibilities

Forms

- Complete forms and templates

The image shows two forms. The first is a table titled 'Energiebilanzierung der Anlage' with columns for 'Anlage', 'Energie', 'Energieverbrauch', 'Energieeffizienz', and 'Energiekosten'. The second is a form titled 'Energieaudit' with fields for 'Name der Anlage', 'Standort', 'Datum', 'Name des Auditoren', 'Firma', and 'E-Mail-Adresse'.

Legal provisions

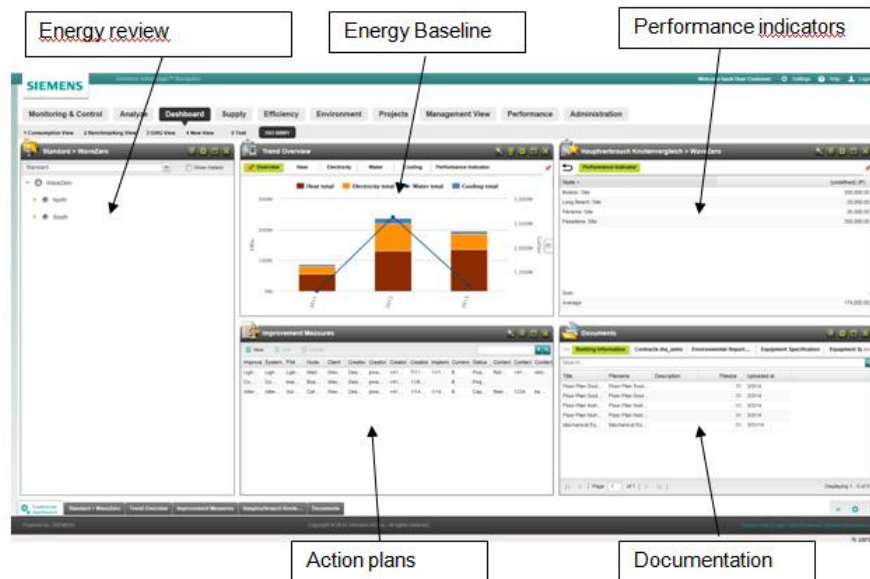
- Documentation of legal requirements and guidelines

The image shows a table titled 'Rechtskataloger Energiemanagement'. It has columns for 'No.', 'Bezeichnung', 'Gesetzliche Grundlage', 'Anwendungsgebiet', 'Fristen', and 'Energieeffizienz'. The table lists various legal provisions related to energy management, such as 'Energieauditgesetz', 'Energieeffizienzgesetz', and 'Energieeffizienzrichtlinie'.

The webbased service platform navigator from Siemens

- The web based service platform navigator from Siemens can be used as the main platform for ISO 50001
- It guides you through the internal and external audits as well as the review processes; and helps to comply with requirements of the ISO 50001 standard
- The web based service platform navigator from Siemens will help to collect and organize required data and documents. It drives to put in action the potential revealed through ISO 50001 and helps to track the progress of projects and achieved savings

Step 3 Energy report and action plan



Content of energy report

- **Energy review**
With the tree structure widget it can clearly identify the different consumption points of the certified entity
- **Energy baseline**
Various reports in Navigator provide capabilities for calculating a baseline and benchmarking the performance over time. Reports cover extensive media types, various fuels, heat, electricity
- **Performance indicators**
Key KPI's can be evaluated
- **Action plans**
Through the project app and improvement measures widget all action plans can be listed with the expected savings in kWh, CO₂ and EUR
- **Documentation**
All relevant documentation to the certification can be stored in Navigator. Documents are also easily accessible during audits

Step 4 Training

Energy management system training

- Train your energy manager(s) to ensure the operation of the energy management system is efficient and effective
- Ensure your energy manager understands their role and responsibilities in maintaining the EnMS

Energy awareness training

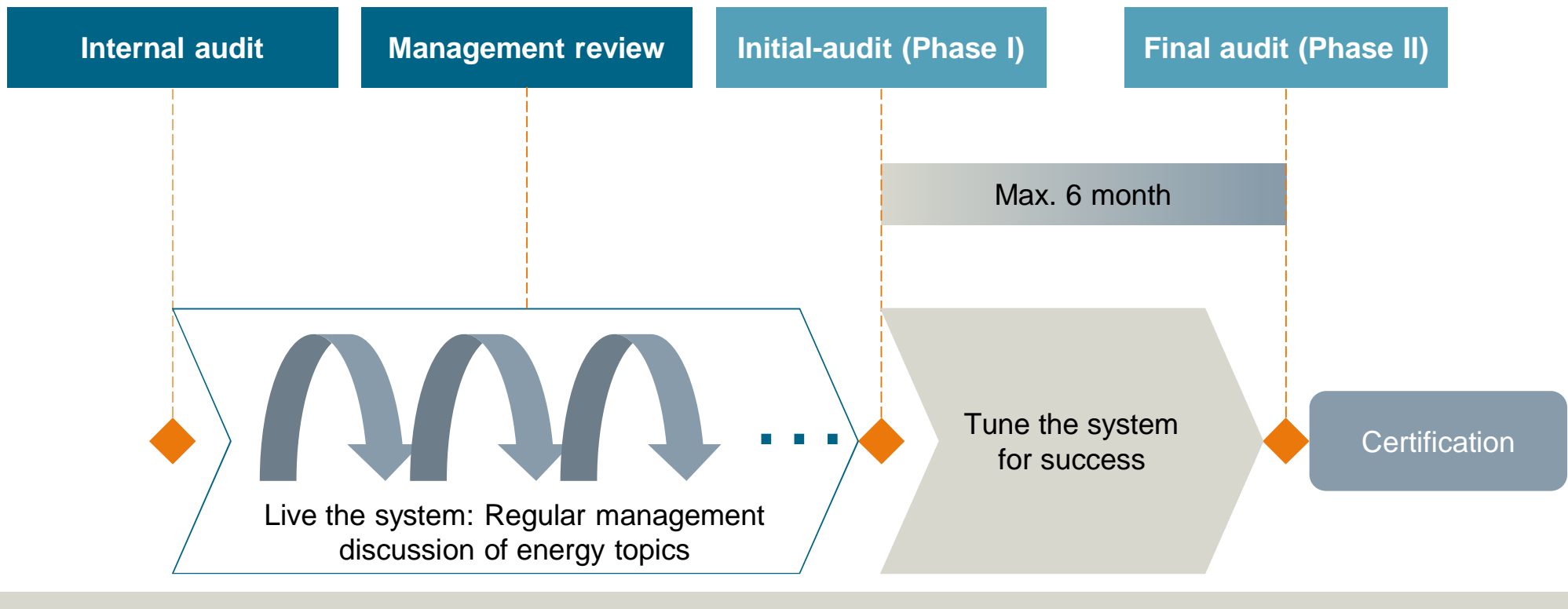
- Technical training to build the awareness of employees regarding energy performance
- Support the employees in enhancing their energy awareness and encourage them to actively participate to improve energy performance

We provide ...

- Training material
- Training plans
- On site training of employees

Step 5 Internal audit and certification

Review and optimization of the Energy Management System



Step 6 Maintenance of Energy Management System

Options for continual improvement of the Energy Management System by Siemens Consultants

- Improvement of ISO 50001 documentation (contents and processes)
- Creation or assessment of the Energy Reports
- Annual updating of the Energy Analyses and Internal Audits
- Annual updating of the Action Plan
- Training of employees and optimization of organizational and communication processes
- Support of Management Review and adjustment of energy policy

Why Siemens?

- 
- A man with dark hair, wearing a grey suit jacket and a white shirt, is shown in profile, looking out a window. The background is a blurred view of a city skyline with greenery in the foreground.
- Professional team with broad technical and managerial competences
 - Over 15 years of energy efficiency consulting experience
 - Siemens has the largest environmental portfolio in the world
 - Our consulting services are backed by a broad range of products and solutions
 - Consulting – Implementation – Financing!
 - Broad industry know-how!
 - A name synonymous with high quality products and solutions!

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Enhancing the energy awareness Rubin Mühle GmbH



Highlights

- Supporting ISO 50001 certification
- Identifying and documenting energy saving measures
- Benefiting from funding options and tax savings in the EU
- Increasing energy efficiency and sustainability by implementing energy saving measures
- Cutting costs and boosting a green image

Challenge

- ISO 50001 certification needed to qualify for energy efficiency tax relief (energy savings legislation in Germany "EEG")

Solution

- Site visit, data collection and compilation
- Evaluation and processing of data
- Assessment and evaluation of energy saving potential
- Design and implementation of an organizational structure and documentation according to DIN requirements (DIN = German Industry Standard)

Customer benefit

- Increased awareness for energy conservation at all corporate levels
- Transparency of the energy usage and the energy costs
- 20% reduction in costs thanks to introduction of energy management system to comply with the "EEG" taxation law

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