Data Center & ISO 50001 certification

SOCOMEC
Innovative Power Solutions

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Critical Power

Ensuring the availability of high-quality power for critical applications

Power Control & Safety

Managing power and protecting individuals and property

Solar Power

Guaranteeing the safety and durability of photovoltaic (PV) facilities

Energy Efficiency

Improving building and facility energy efficiency

Agenda

- 1) Introduction
- 2) ISO 50001 standard
- 3) Data Center & ISO 50001 certification
- 4) Energy monitoring & management
- 5) Conclusion

Introduction

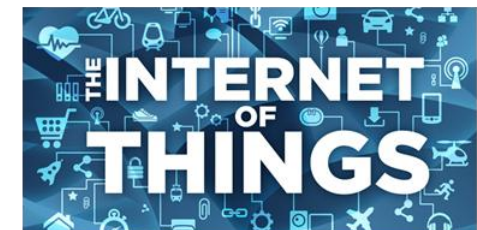Digital traffic is expanding annually by +20%...

Growth is driven by the connected users & the Internet of things…

3B internet users

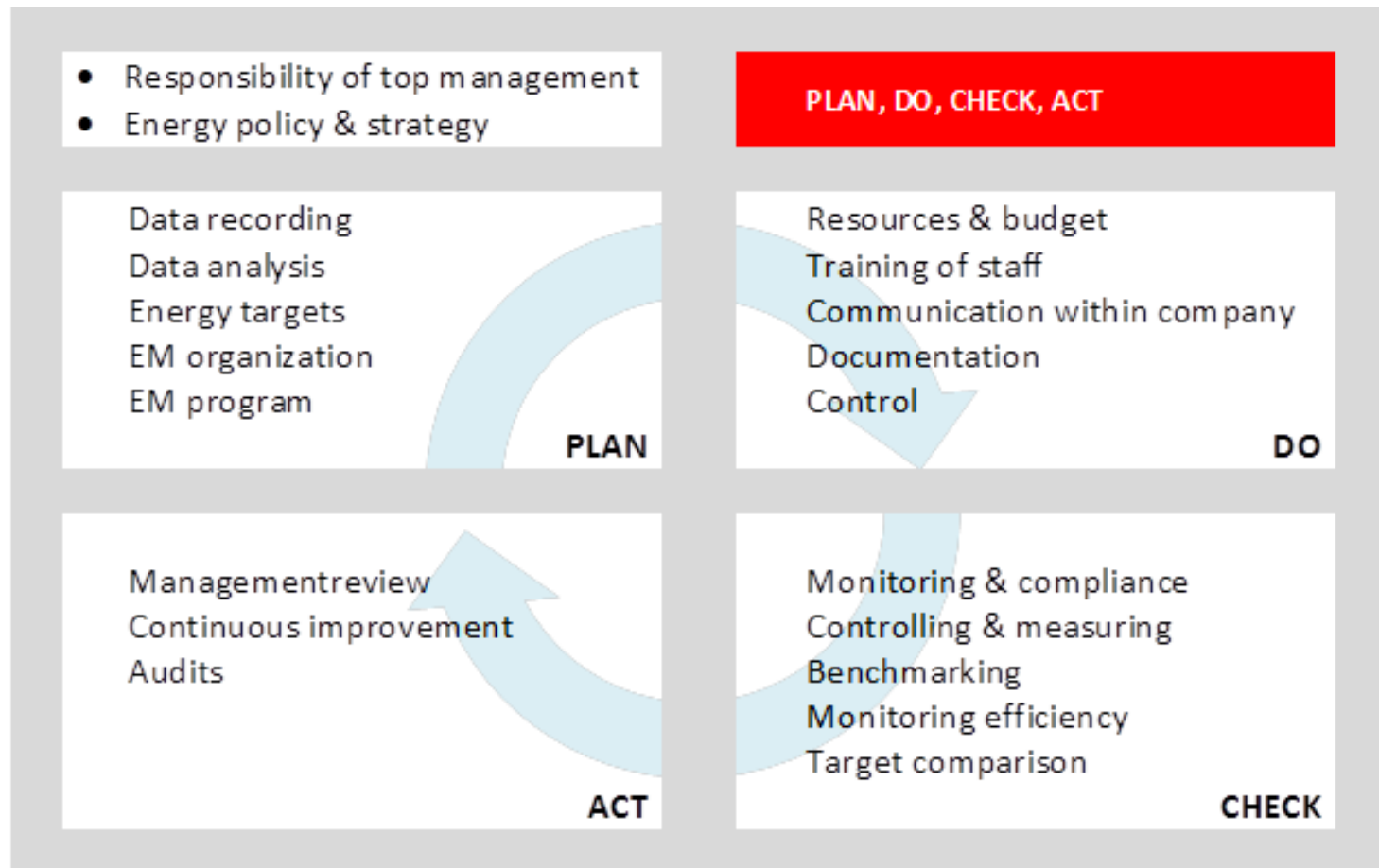**350M photos / day**

4B hours / month

25B Connect. Dev.

facebook.

You Tube

THE INTERNET OF THINGS

IT ROOM INFRA

Introduction

Wet- en regelgeving	Managementsystemen
Milieu	ISO 9001
Energie	ISO 14001
Arbo	ISO 50001
Veiligheid	OHSAS 18001
Ruimte	CO2 prestatieladder

Wetgeving

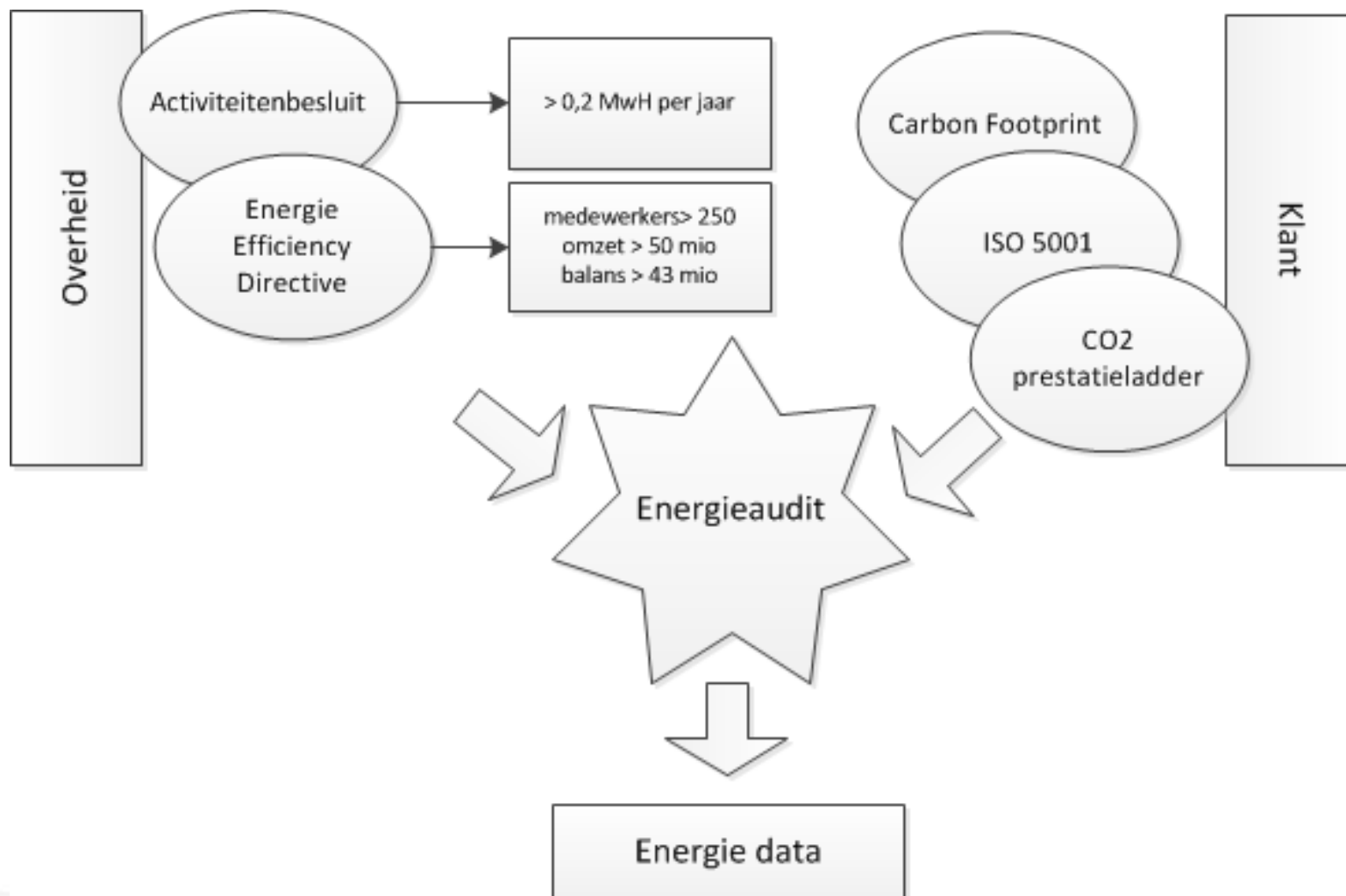| Wetgeving	Eis	Wanneer
Activiteitenbesluit	Vastgestelde maatregelen Energie audit	> 50 MwH per jaar > 200 MwH per jaar
Energy Efficiency Directive	Energie audit	> 50 mio omzet > 43 mio balans, of > 250 medewerkers
Bouwbesluit	EPC	Nieuwbouw • vergaderruimte 1,1 • kantoor 0,8
Besluit energieprestatie gebouwen	Energielabel	Verkoop of verhuur kantoor en vergaderruimte > 50 m^2

ISO 50001 standard

- Responsibility of top management
- Energy policy & strategy

PLAN, DO, CHECK, ACT

Data recording
Data analysis
Energy targets
EM organization
EM program

PLAN

Resources & budget
Training of staff
Communication within company
Documentation
Control

DO

Managementreview
Continuous improvement
Audits

ACT

Monitoring & compliance
Controlling & measuring
Benchmarking
Monitoring efficiency
Target comparison

CHECK

ISO 50001 standard

Energy monitoring & management

➢ **Energy Review**

- ▪ Analyze use and consumption
- ▪ Identify significant use: servers, storage, network, cooling, electrical losses, …
- ▪ Opportunities for improving energy performance

➢ **Energy baseline** *(EnB)*

➢ **Energy Performance Indicators** *(EnPIs)*

- ● *PUE: Power Usage Effectiveness*
- ● *CUE: Carbon Usage Effectiveness*
- ● *WUE: Water Usage Effectiveness*
- ● *Others: **Renewable Energy Factor (REF)**, **IT Equipment Energy Efficiency for Servers (ITEE), IT Equipment Utilization for Servers (ITEU),** Net Power Usage Effectiveness (NPUE), …*

➢ **Objectives, targets and action plan**

Data Center & ISO 50001 certification

When procuring energy services, products and **equipment that have, or can have, an impact on significant energy use,** the organization shall inform suppliers that procurement is partly evaluated on the basis of energy performance.

500 kWh UPS	Annual UPS losses costs	Annual cooling costs for losses
96% efficiency	18200 €	5500 €
92% efficiency	38100 €	11500 €
OPEX savings	**19900 €**	**6000 €**

Energy monitoring & management
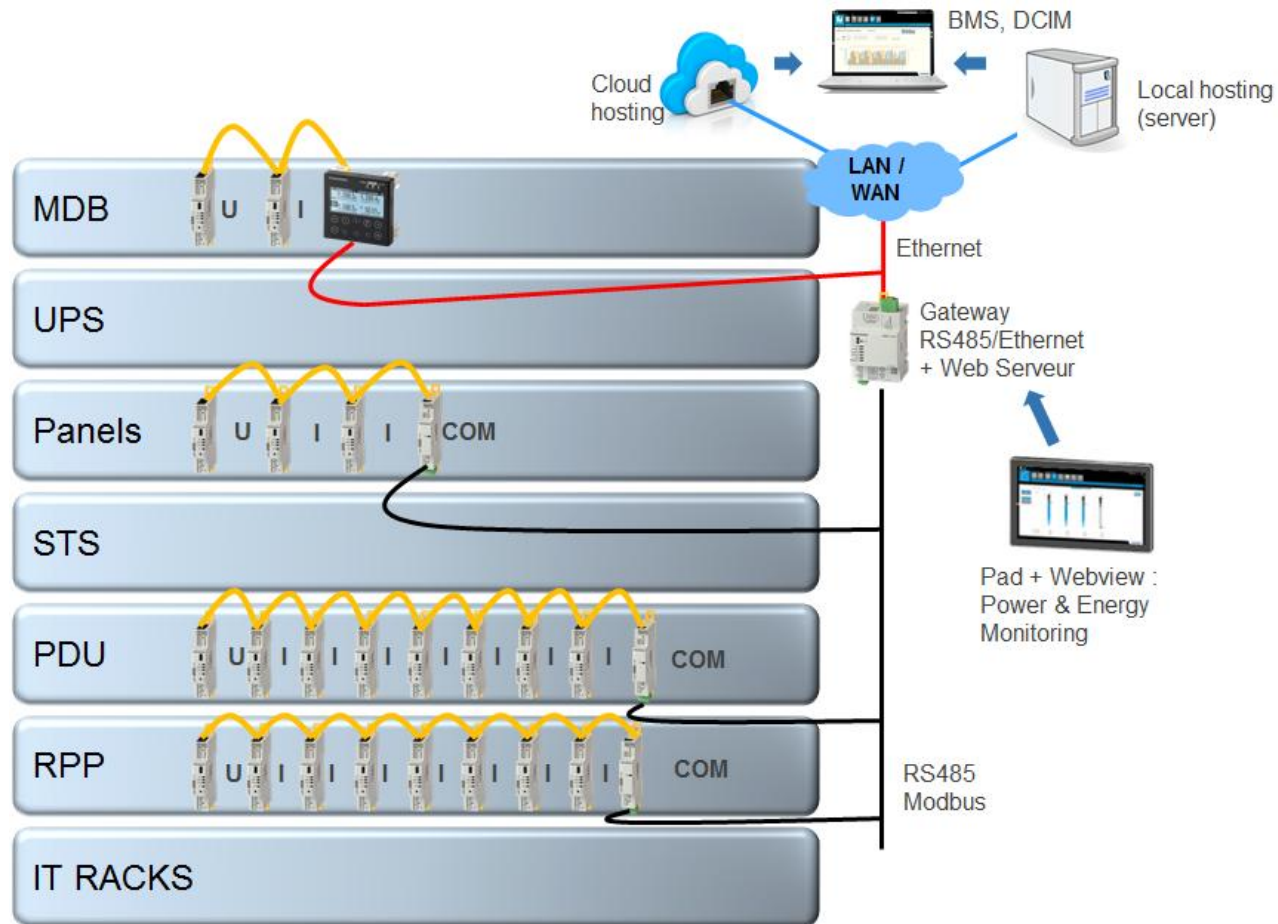
Conclusion

What are the benefits of energy management & ISO 50001 ?

Increases energy cost savings & therefore profitability

Improves operations & capital cost decisions

Reduces GHG emissions & carbon footprint

Increases ability to benchmark, measure, report improvements

Allows organisation to gain credible external visibility

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