

Changing Behaviour and Culture using ISO 50001

John Mulholland
Phillipa Coan

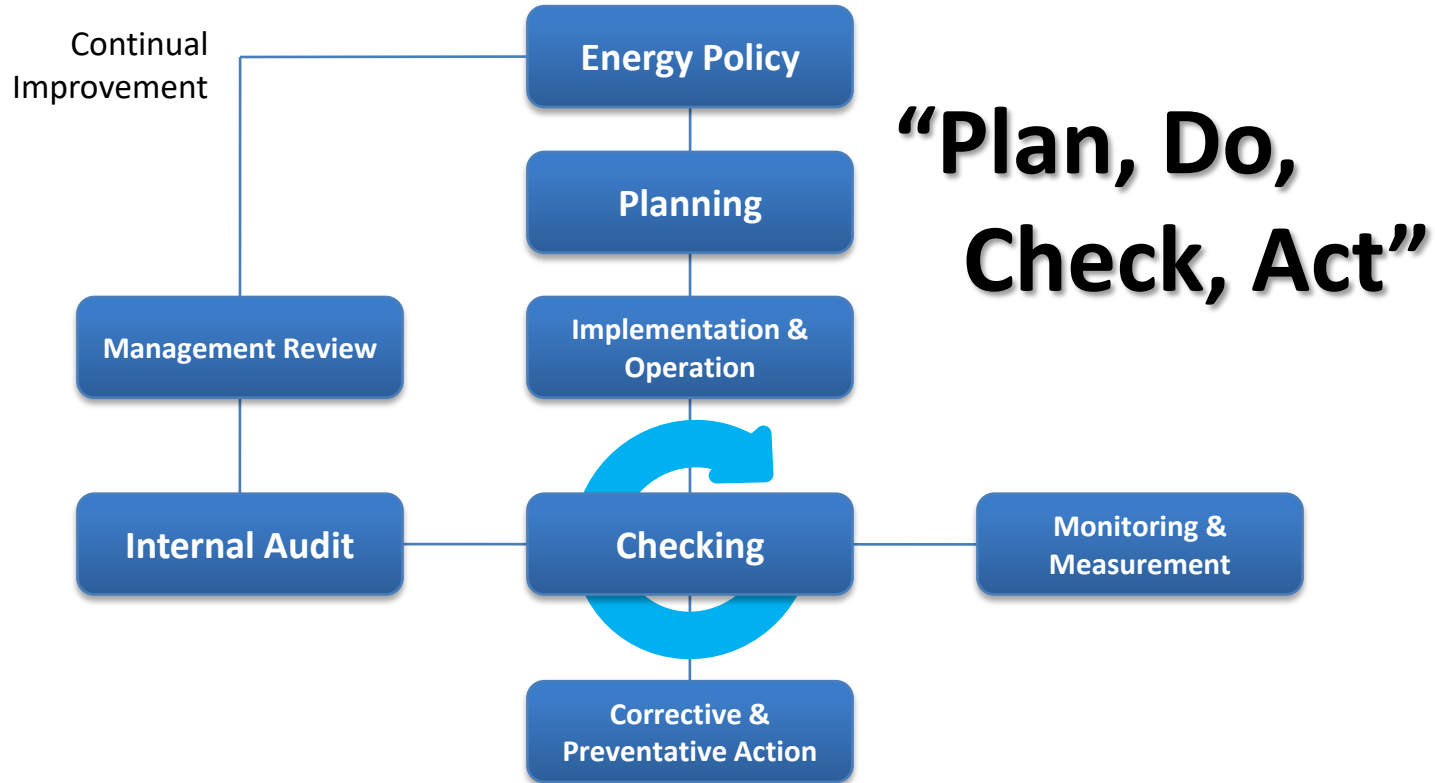
Webinar Content

- Introduction to ISO 50001
 - The people aspects of ISO 50001
 - How to achieve behaviour change
-

Definition of Energy Management System (EnMS)

An EnMS is a structured, defined and disciplined approach, applied to key aspects of energy management, to deliver continual improvement in energy performance.

Energy Management System Model



What is ISO 50001?

- ISO 50001:2011 - Energy Management System **Standard**
- **Energy Management System (EnMS)** needs to be compliant with ISO 50001 to be **certified**
- Certification is issued by a certification body (CB) **accredited** by UKAS or another national body (e.g. INAB in Ireland). 16 CBs in UK.
- ISO 50001:2011 is under revision.....

Benefits – 7 Cs

- Cost/Consumption/CO₂
- Compliance (ESOS)
- Competitiveness
- Competence
- Continuity
- Continual
- Cultural



Global ISO Certification Comparison 2015/2016

Standard	Number of certificates in 2015	No of certificates in 2016	Change	% change
ISO 9001	1,034,180	1,106,356	72,176	+ 7%
ISO 14001	319,496	346,189	26,693	+ 8%
ISO 50001	11,985	20,216	8,231	+ 69%

Source: www.iso.org (September 2017)

For 25% growth rate year on year, certifications = 50,000 by 2020.

ISO 50001 Clause Types

Type

Examples

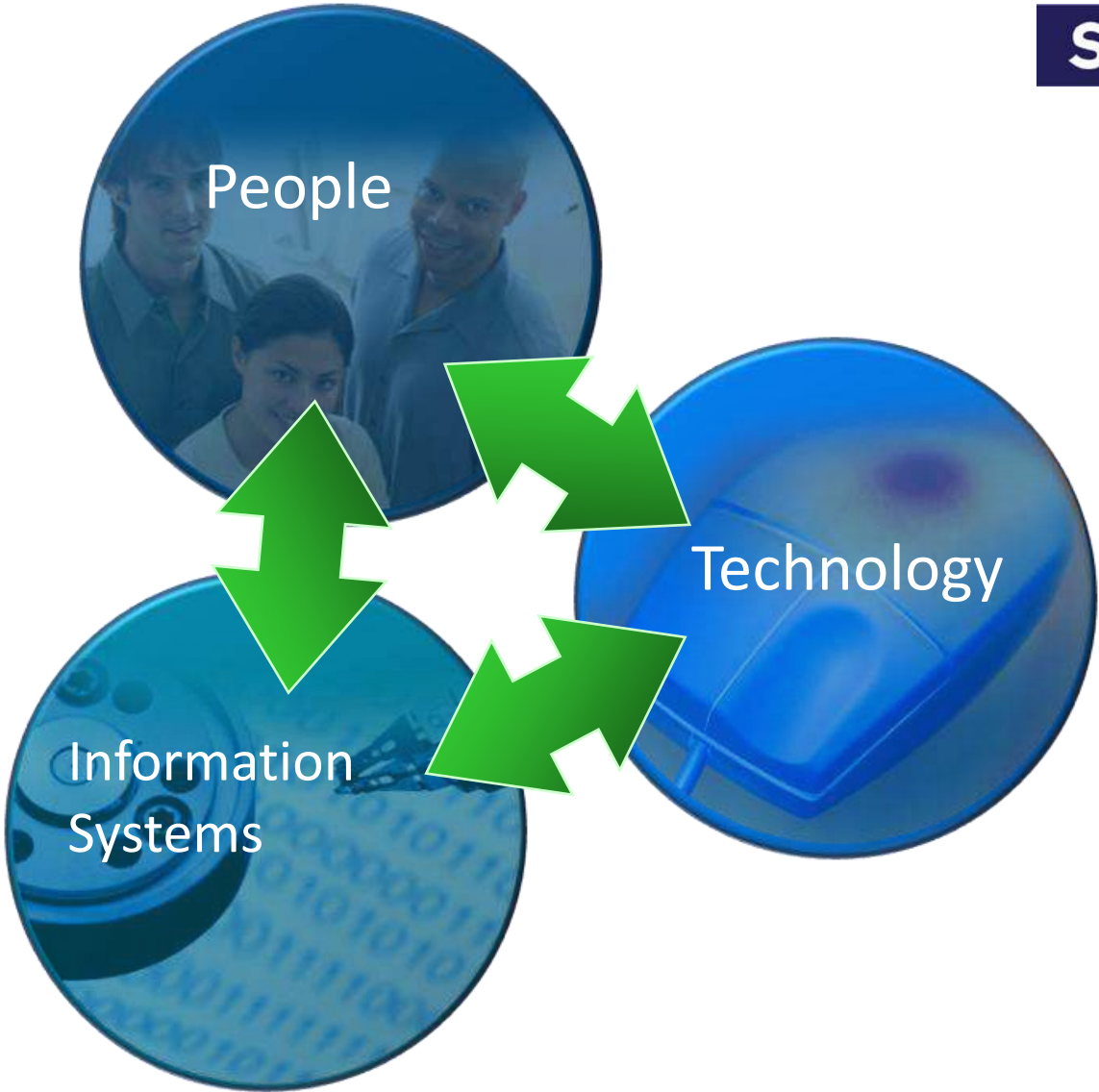
System Requirements

Control of documents
Internal audits
Non conformity
Management Review

Energy Requirements

Energy Policy
Significant Energy Use
Opportunities
Energy Performance

Indicators



People

Technology

Information
Systems

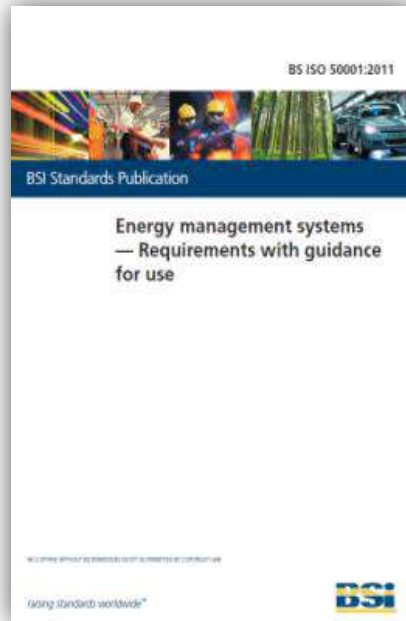
Main Energy Clauses (1)

Clause	Category
Top Management	People
Management Representative	People
Energy Policy	Information
Energy Review	Information/Technical
Energy Baseline	Information
Energy Performance/Targets/ Action Plans	Information

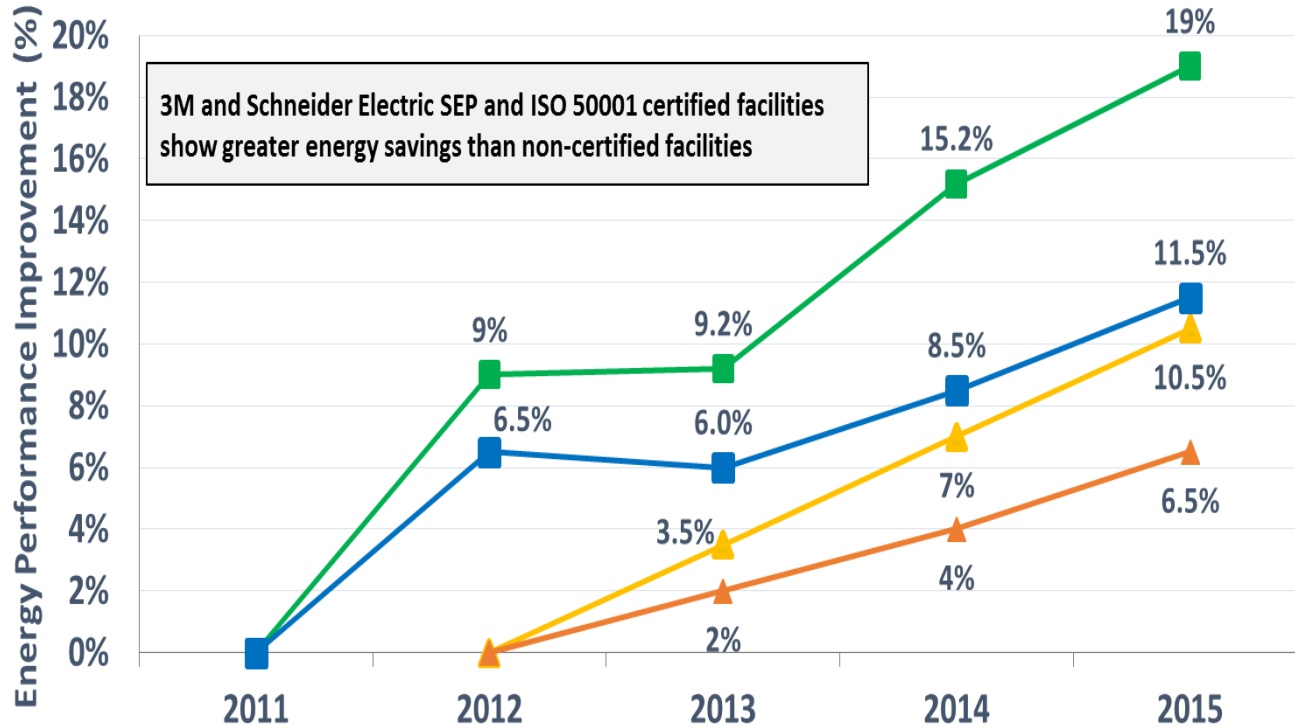
Main Energy Clauses (2)

Clause	Category
Implementation/Operation	Technical
Competence/Training/Awareness	People
Communication	People
Operational Control	Technical
Design	Technical
Procurement	Technical
Monitoring/Measurement/ Analysis	Information

What is the evidence to demonstrate ISO 50001 makes a difference?



ISO 50001 and SEP Certified Plants Outperform Peers



Data analysis conducted by
3M and Schneider Electric

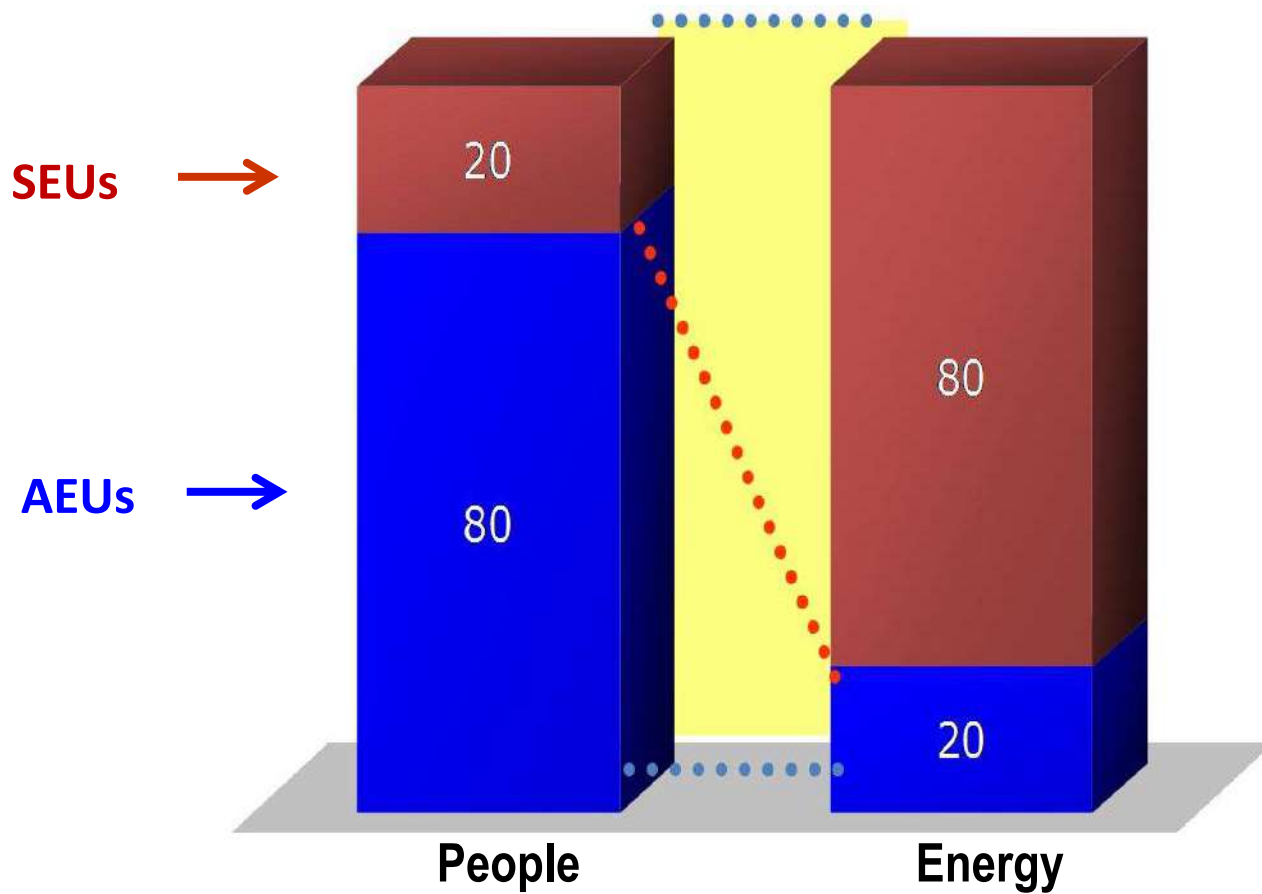
■ Schneider Electric: ISO 50001 and SEP Certified
 ▲ 3M: ISO 50001 and SEP Certified
■ Schneider Electric: Not ISO 50001 or SEP Certified
 ▲ 3M: Not ISO 50001 or SEP Certified

Commitment Required

- Top Management
- Management Representative(s)
- EnMS Team
- Significant Energy Users (ISO 50001:2011)
- EnMS Effective Personnel (ISO 50003:2014)
- All Energy Users



Focus



Awareness/Employee Clauses in ISO 50001

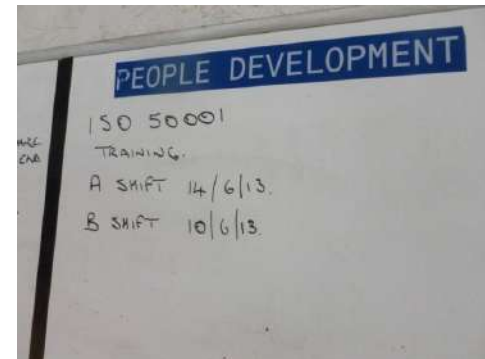
4.2.1 Senior Management

4.2.2 Management Representative

4.5.2 Competence, training and awareness

- Significant Energy Users
- All Energy Users

4.5.3 Communication



Continual Improvement

STRIDE



IBSTOCK[®]
— building sustainability



*Ibstock's motivation for implementing ISO 50001 was to make better use of the energy we consume and achieve consistency in production processes through our **people**.*

*We are extremely proud of what the ISO 50001 process has achieved as it has given us a clear road map, effective **communication** tools, supportive external **partnerships** and, above all, **employee involvement at all levels**.*

Michael McGowan

Quality, Environmental and Energy Manager



Why is the people aspect important?

- Technology alone does not achieve the predicted savings
 - Workplace = ideal context for creating behaviour patterns
 - Small scale employee environmental behaviours can have a significant impact when multiplied throughout an entire organisation
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Behaviour Change is the most cost effective tool

Carbon Disclosure Project's Carbon Impact Report

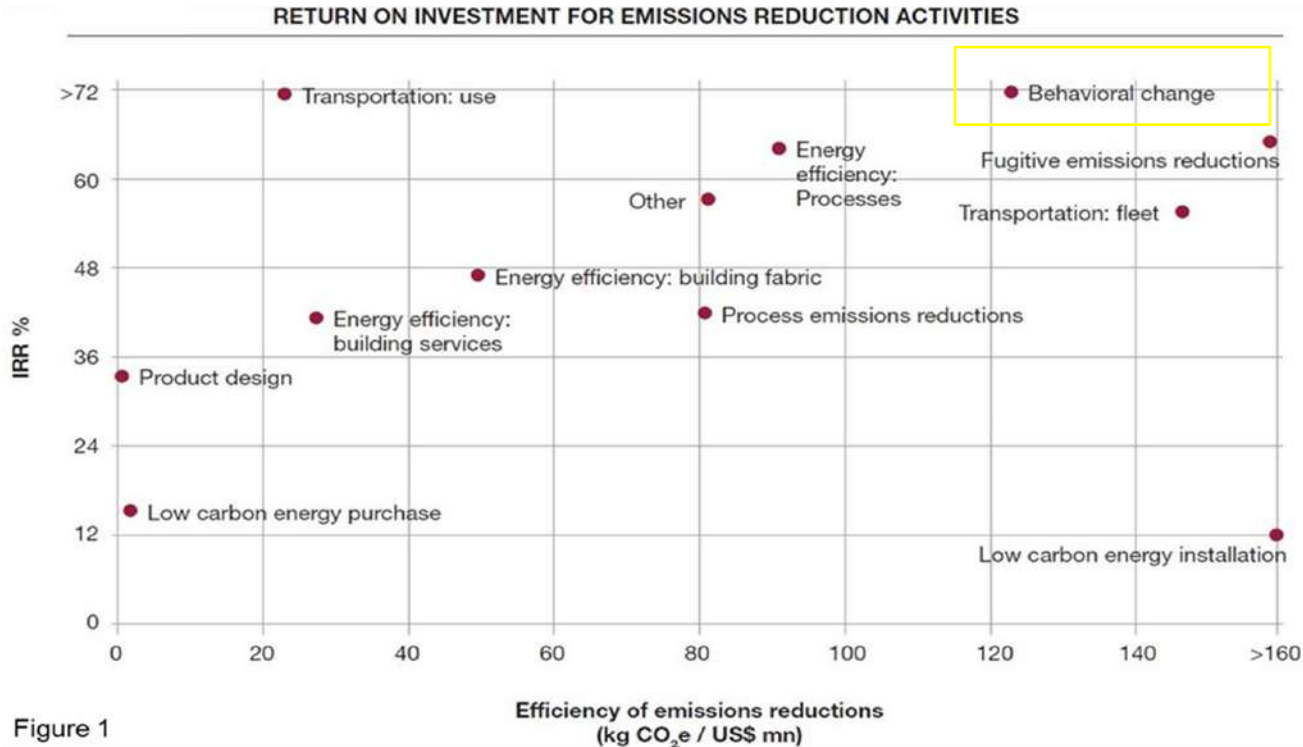


Figure 1

Efficiency of emissions reductions
(kg CO₂e / US\$ mn)

How do we change environmental behaviour at work?

Process of driving change

Organisation A



Process of driving change

Organisation B

Impact
Control
Low Uptake
Measurable

Who
What
When

Where
How often
With whom



Significant/High Users All Users



COM-B Model
Michie et al, 2011

Behaviour Change Strategies



Feedback



Convenience



Norms



Incentives



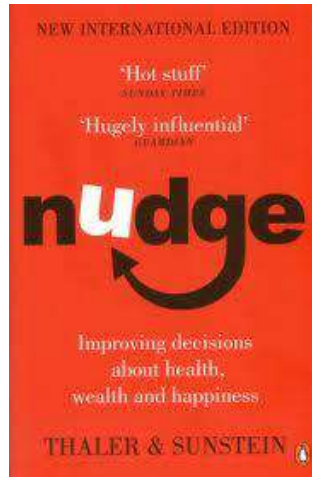
Powerful Information



Commitments



Convenience





Norms

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Different types of norms:



What one ought to do
(injunctive norm)

What most people do
(descriptive norm)

Goldstein et al's (2005) hotel
study to increase re-using towels





Commitments

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I commit to start a business start Now!

Be on time, study hard, lose weight, no more debt, more time with family, better sleep schedule, eat better, go back to the gym, help others, go jogging, learn something new...

1 Select your goal

2 Set the stakes money is optional

3 Get a referee

4 Add friends for support

DoNation

WeAreDoNation.com

[@The_DoNation](https://twitter.com/The_DoNation)



Powerful Information



Knowledge
& Awareness

X

Attitudes

X

Concern

X

Intentions

X

Behaviour

- Tailored
- Framed
- Credible
- Feedback
- Goals
- Commitments
- Emotive



Incentives

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Following self determination theory, there are 2 types of motivation: **Autonomous and Controlled**



Rewards more effective than punishments

Typically financial incentives are used



Look back to information collected at the Analyze stage



What is most likely to motivate your target audience?



Feedback

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One of the best tools for behaviour change (5-15% savings in energy consumption)

Ideally needs to be:

- ✓ Immediate so employees can link behaviour with consequences
- ✓ Continuous e.g. use of smart meters, dashboards
- ✓ Specific

Success of comparative feedback

- ✓ Both domestic and workplace success.
- X Beware of the 'boomerang' effect!



Summary

1. ISO 50001 is good for reducing energy consumption.
 2. ISO 50001 is a lever for engagement at all levels and behaviour change
 3. Remember to consider your target audience, the specific behaviours to focus on and the full social and workplace context.
 4. The most effective behaviour change strategies
 - Tailored approach
 - Always provide feedback
 5. Combination of strategies most effective
-

THANK YOU

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"I was just er... conserving energy."

John@mulhollandenergy.co.uk

@JMulholland1

Phillipa@thestrider.co.uk

@PhillipaCoan