International Energy Agency

Toolkit
Did it work? Monitoring and evaluating

Session 10

Charles Michaelis, Strategy Development Solutions – Pretoria, 16 October 2019

#energyefficientworld

Overview of the appliance and equipment training sessions

Monday 14 October 2019		
0	Introduction and roundtable	☑
1	Planning energy efficiency programmes	☑
2	Selecting products for MEPS and Labelling programmes	☑
Tuesday 15 October 2019		
3	Assessing efficiency performance and setting MEPS	☑
	Special - Regional harmonisation	☑
4	Industry transformation	☑
5	Stakeholder involvement and communication	☑
6	The relationship between product efficiency and price	☑
7	Modernising energy efficiency through digitalisation	☑
Wednesday 16 October 2019		
8	Insights into energy labels	☑
9	Monitoring, verification and enforcement	☑
10	**Evaluating policies and programmes**	☐
	Special - Available resources U4E	☐
11	Roundtable discussion, review and report back	☐

What is evaluation?

Evaluation is an **objective** process of understanding **how** a policy or programme was implemented, **what** effects it had, for whom and **why.**

Leads to **more effective** policies and programmes

What are indicators

Indicators are clues, signs or markers that describe **observable** changes or events which relate to a programme or policy and show how close a programme or policy is to its desired path and outcomes.

Indicators provide the **evidence** that something has happened – e.g. an output delivered, an immediate effect occurred or a long-term change observed.

Purpose of evaluation

- What we have achieved

- How we can improve

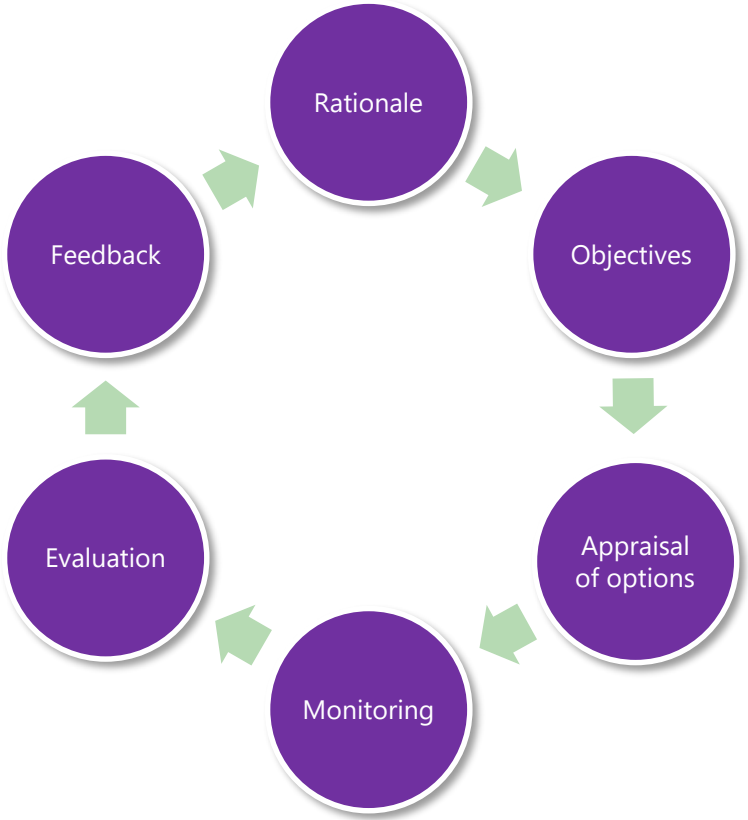
Different questions for different needs

- Regulators
- NGOs and public

- Programme managers
- Partners

- Funders
- Treasury

Indicators and evaluation in the policy making process



Group exercise

As a group, list the reasons why indicators and evaluation are important?

Theory of change

- Forms the basis of monitoring and evaluation
- Should be developed alongside policy/programme design
- Participative process
- Refine in the light of evidence

Generic theory of change

Resources used to deliver the programme/policy – time and money

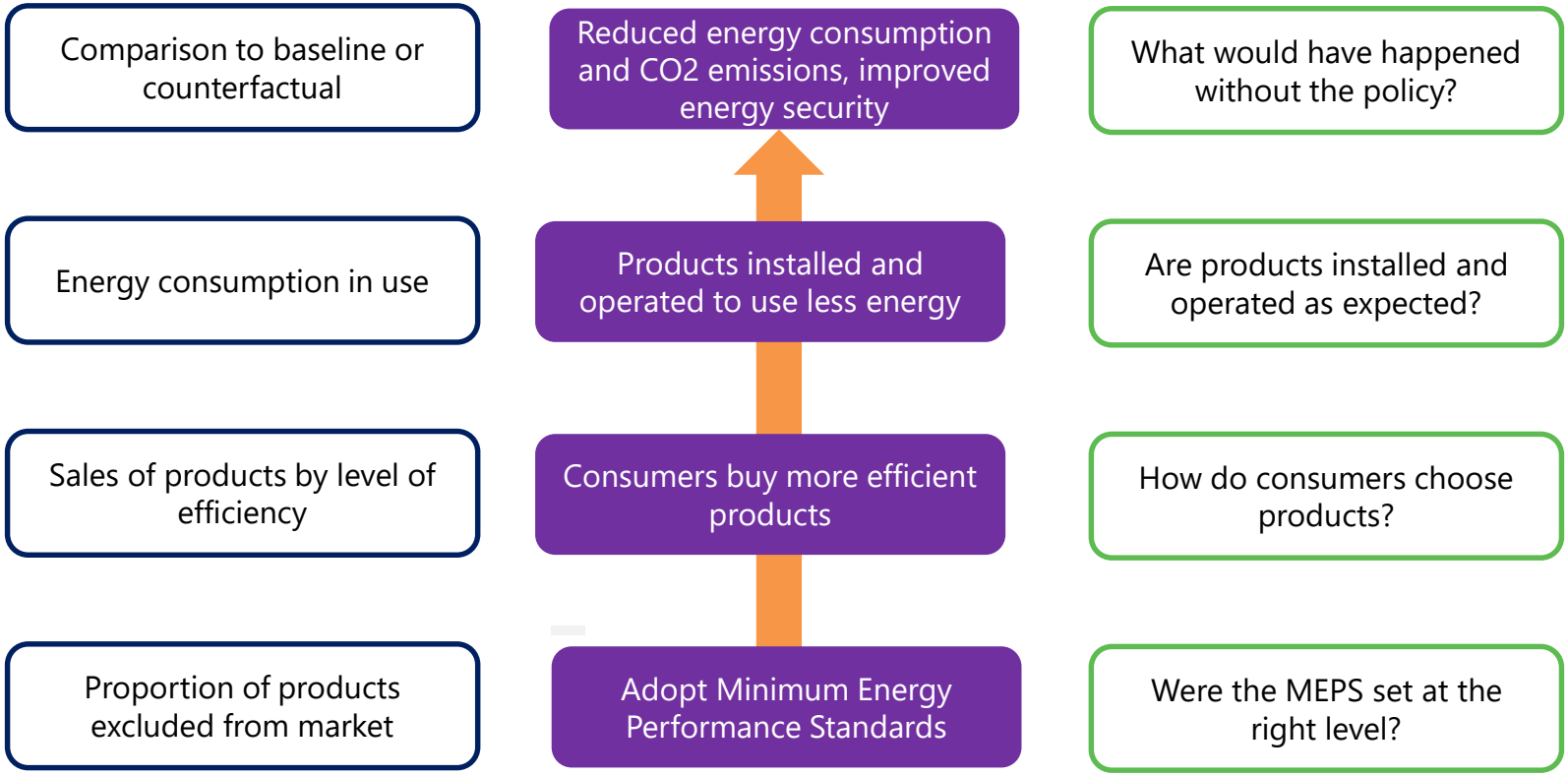
What is done e.g. determine and implement MEPS

What happens as a direct result – inefficient products removed from market

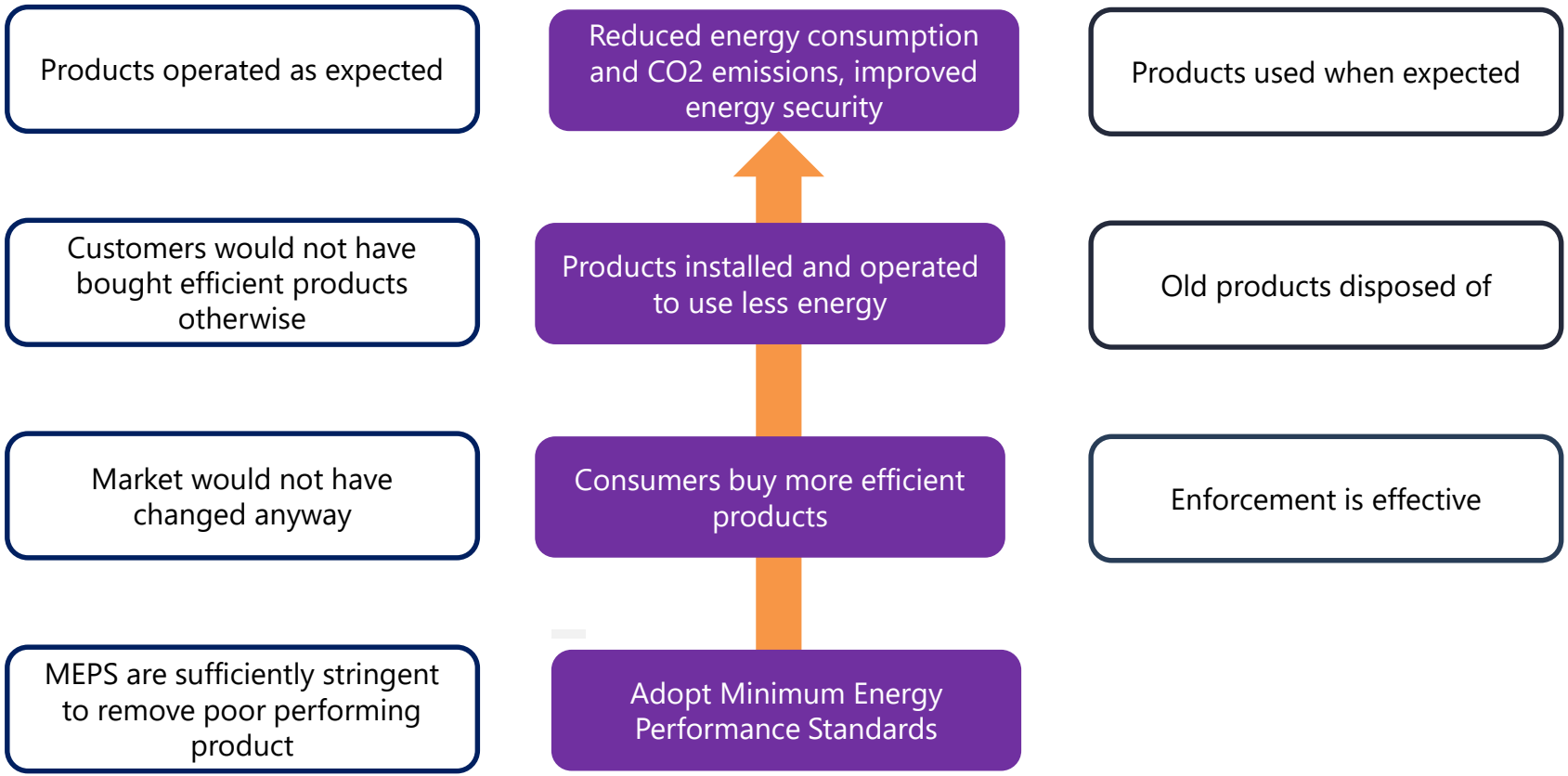
Effect of the change – installed product stock becomes more efficient

Wider effects – reduced energy consumption and CO2 emissions

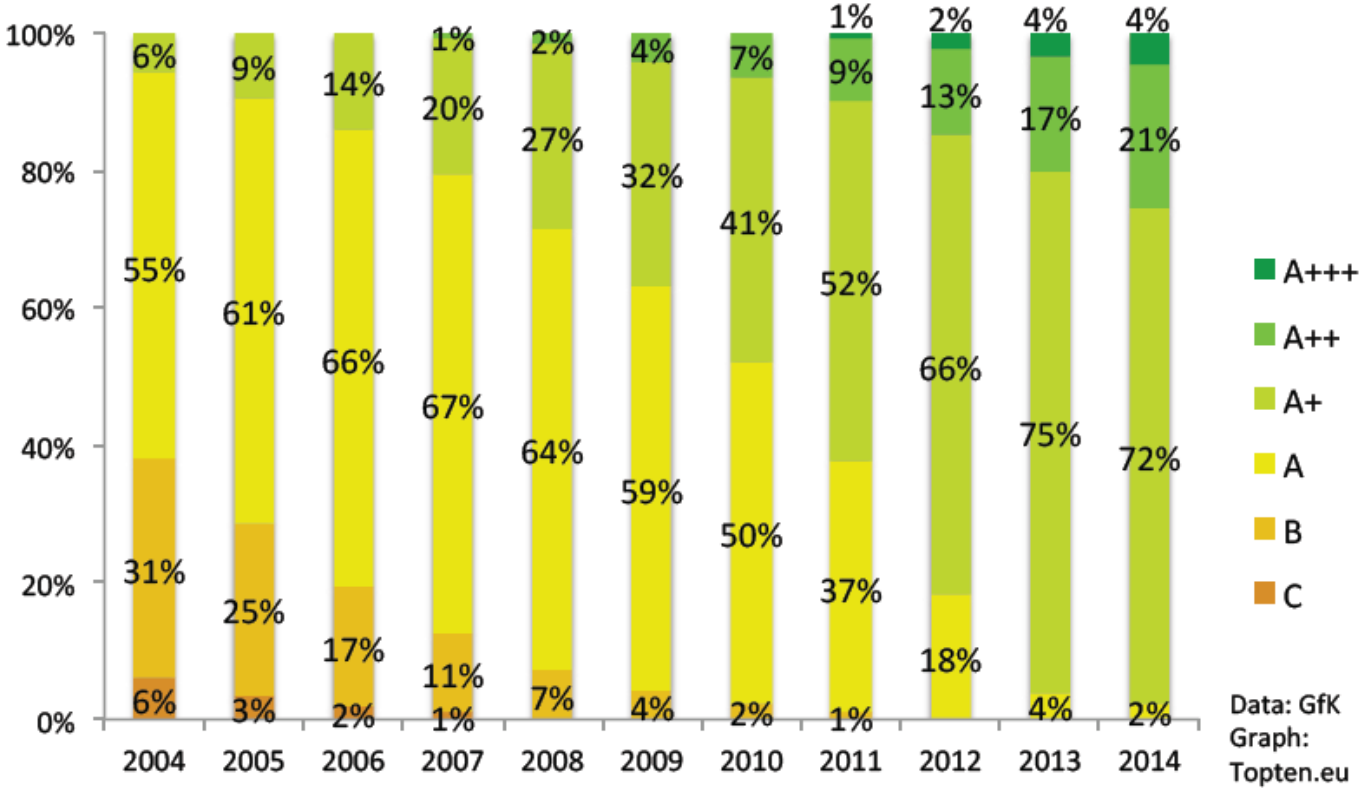
Example indicators and evaluation questions for MEPS

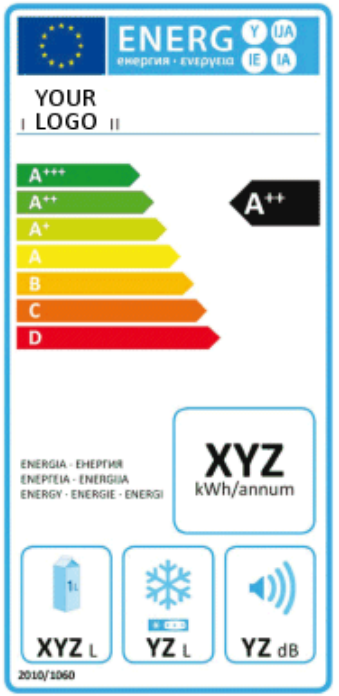


Evaluation should test assumptions



Example indicator: EU Energy Label and Refrigerator Sales





topten.eu - Energy efficiency of White Goods in Europe: monitoring the market with sales data (2004-2014)

- ABOUT **2,884,863** USED FRIDGES IMPORTED SINCE 2005.
- **40,000** UNITS SEIZED SINCE 2013, AND **10,472** TURN-INS.

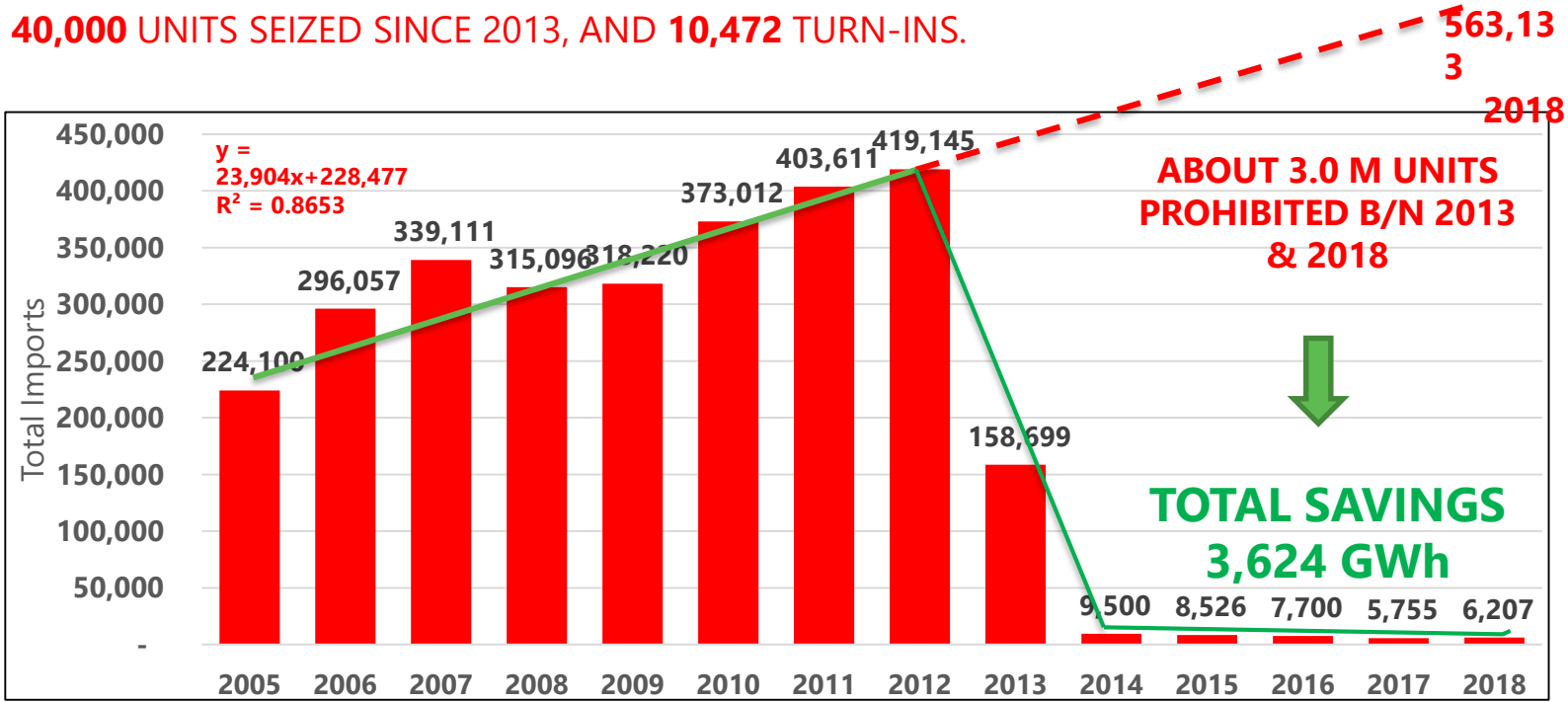


FIGURE 1: TREND IN USED REFRIGERATING APPLIANCES IMPORTS (2005 – 2018)

Trends in New Versus Used Refrigerator Imports (2005 – 2018)

- Drastic reduction in used fridge imports from 2013 due to the enforcement of L.I. 1932 and increase in the imports of the new fridges (l.i. 1958).
- B/N 2013 & 2018, NEW FRIDGES WOULD HAVE CONSUMED 489GWh instead of 1,757gwh, resulting in a saving of 1,268gwh.

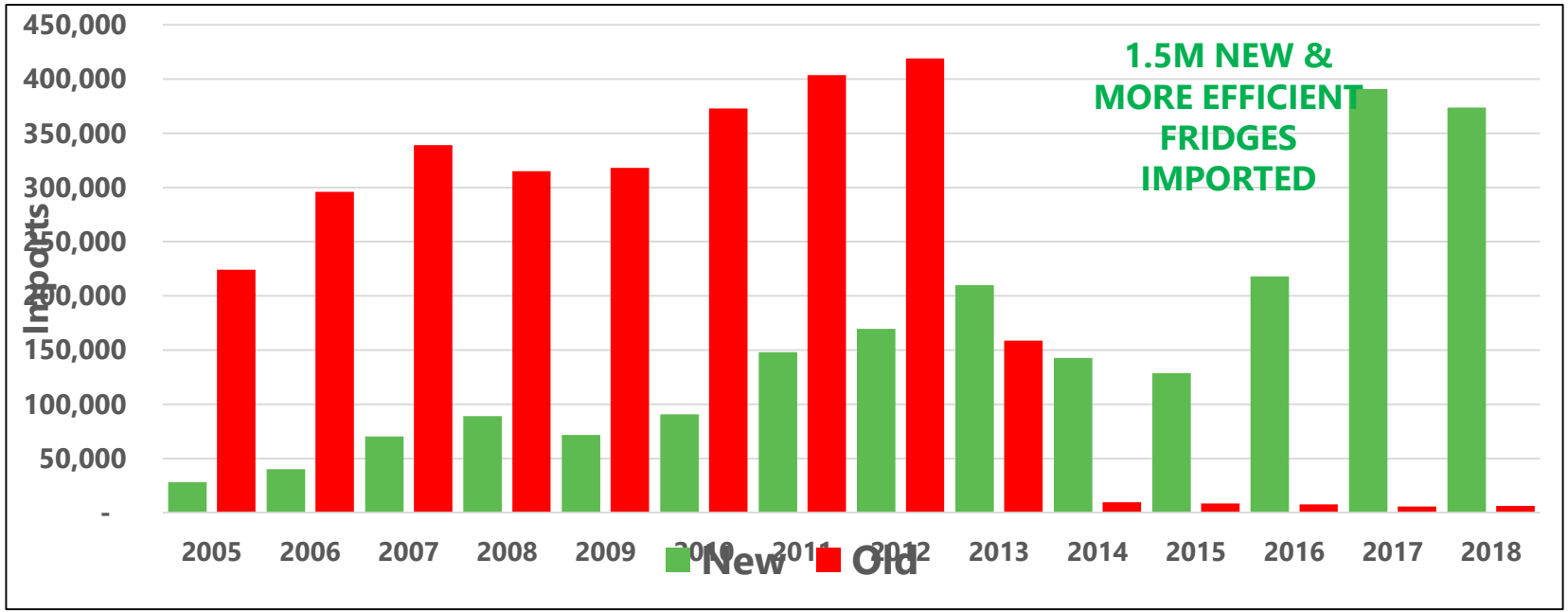
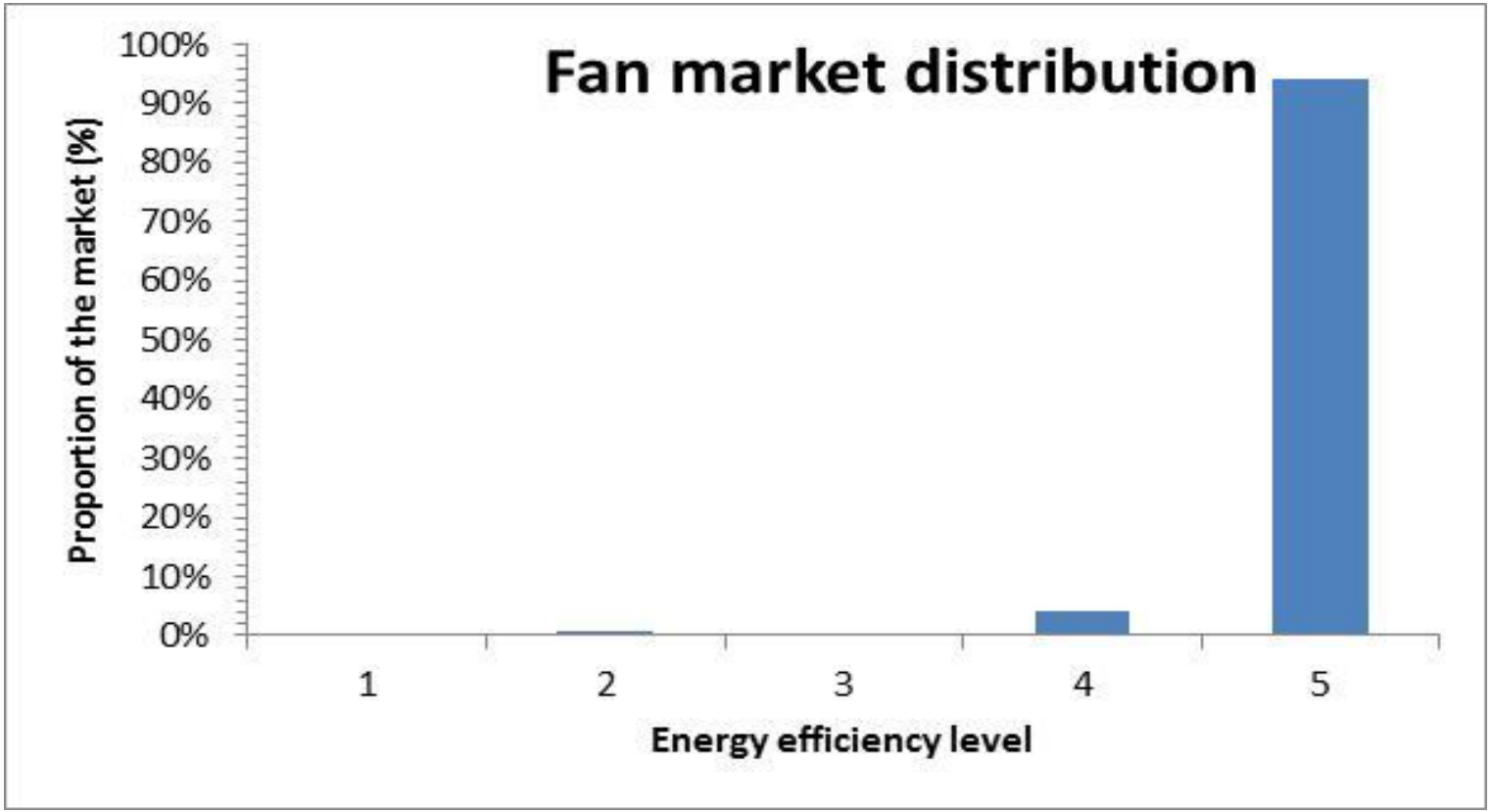


Figure 2: Trends in New Versus Used Refrigerators Imports (2005 – 2018)

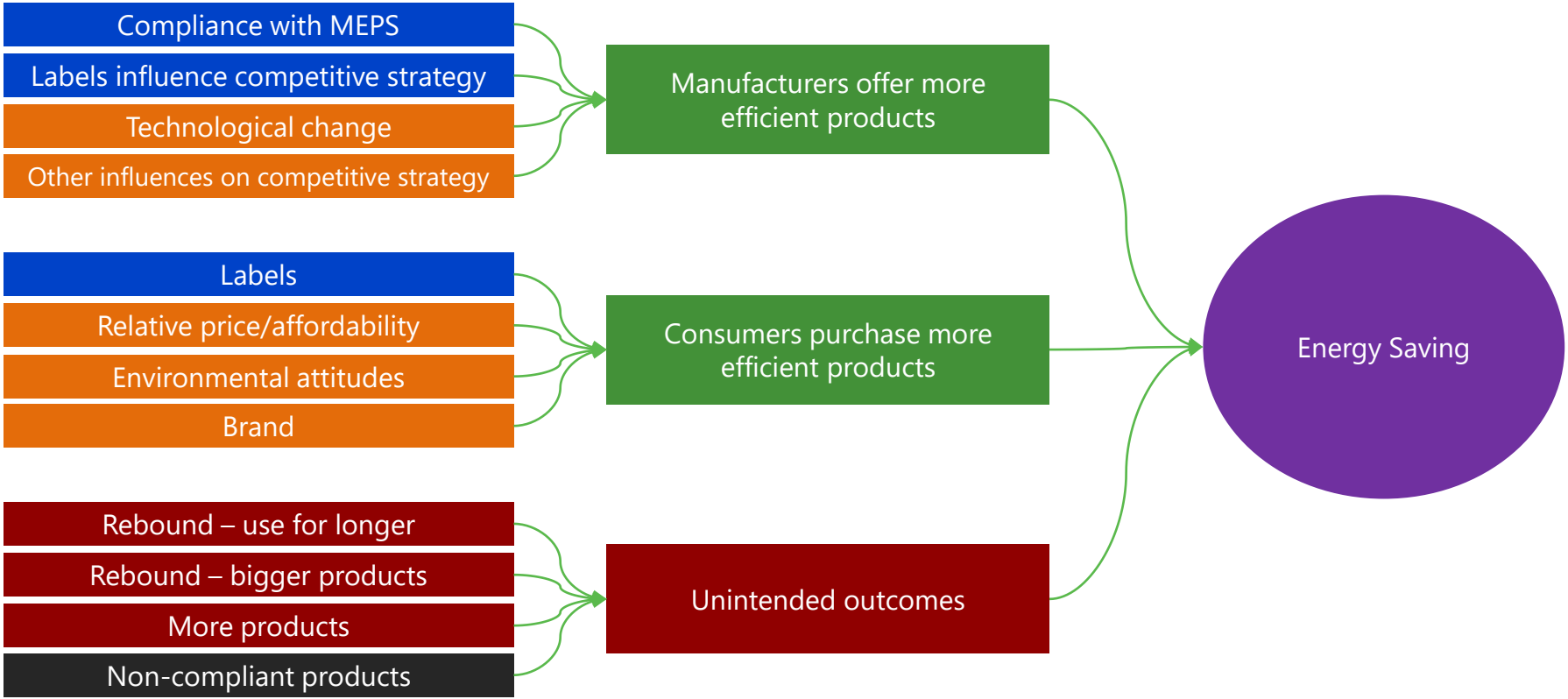
Example evidence



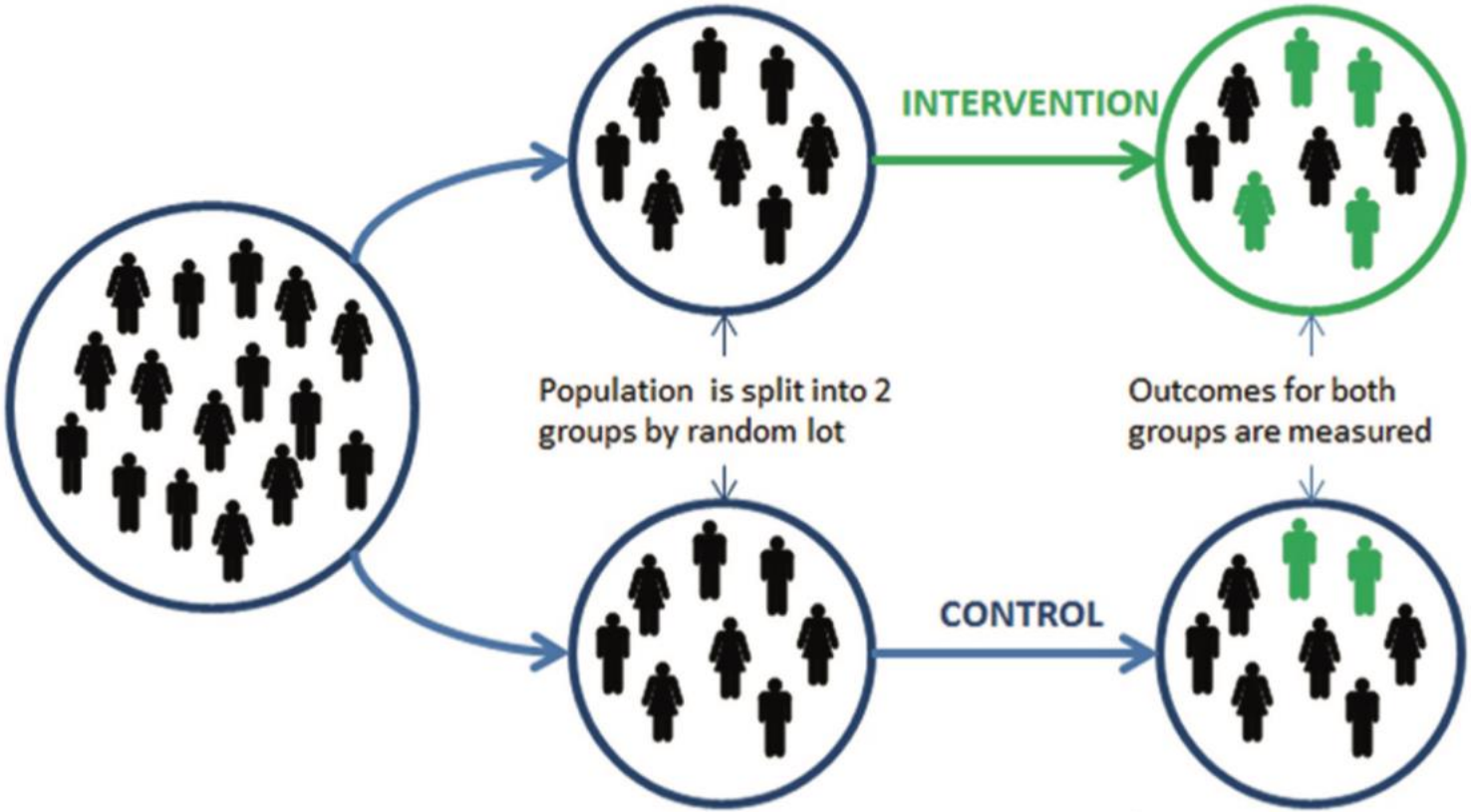
Did it work?

- Are appliances and lighting using less energy?
  - In total?
  - Than they would have done without the policy?
- Is it because of the standards and labelling policy?
  - How and in what circumstances is the policy making a difference?
- Could more energy be saved?
- What are the distributional effects?
  - Who pays and who benefits?

Change isn't just caused by the policy

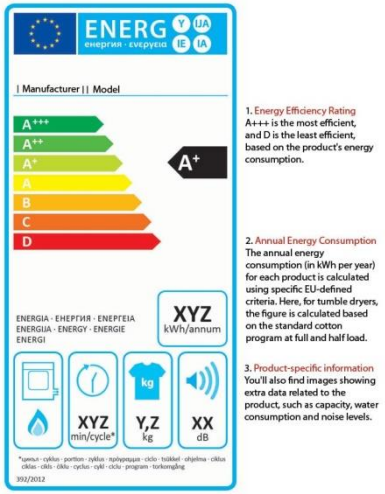


Estimating the effect of energy labels – randomised control trial



Example – randomised control trial

- Test the inclusion of costs on energy label + staff training
- UK Government + John Lewis department store
- Trial group of stores compared to control group
- Small difference for washer dryers, no difference for other products

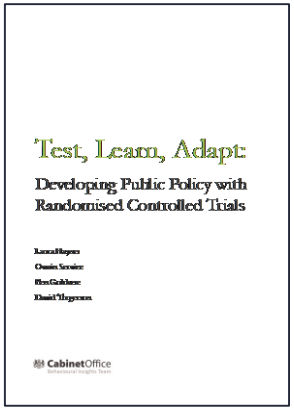


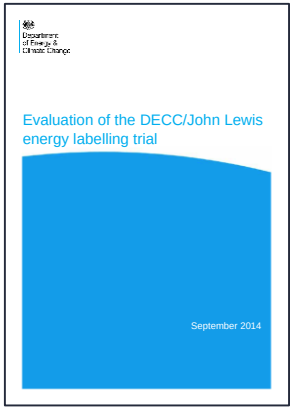
JOHN LEWIS & PARTNERS

Randomised control trial

- Strengths
  - "Prove" effect of policy
  - In the circumstances of the test (when, where)
  - For the indicator being measured

- Weaknesses
  - Doesn't tell you why the policy worked/doesn't work
  - Doesn't tell you if the policy will work in other circumstances
  - Challenging to design and implement





Estimating the effect of energy labels – theory based

- In theory, labels reduce energy consumption because:
  - Consumers have a reliable way of choosing energy efficient products
  - Manufacturers are motivated to produce more energy efficient products
- Theory based evaluation tests:
  - Whether the policy was implemented as intended
  - Whether there is evidence to support the theory
  - What else might explain what has happened
- Contribution analysis assesses the contribution to the change made by:
  - The policy
  - Alternative explanations
- Assess plausibility with a diverse range of stakeholders

Example of theory based evaluation

- Vietnam Energy Efficiency Labels
  - Implemented for a range of products in 2014
  - Survey of manufacturers found that labels had a:
    - Significant influence on manufacturers of air conditioning and refrigerators
    - Moderate influence on manufacturers of fans, rice cookers and lighting
    - No influence on manufacturers of washing machines and televisions
  - Survey of consumers found that labels influenced 85% of purchases to some extent

Summary

- Indicators and evaluation are key to delivering a successful policy
- Use theory of change to identify indicators and evaluation questions
- Consider what else might cause changes
- Design evaluation to test whether your policy has made a difference
- Consider who pays and who benefits to ensure fairness