



What is EMAS?



It is a voluntary environmental management scheme instrument designed by the European Commission

Aim

Continuous improvement in the environmental performance of companies and other organisations

Instruments

Management system enabling organisations to evaluate, improve, measure and report on their environmental performance

Outcomes and Impact

Lower environmental impact, better efficiency and credible information about environmental topics

What is EMAS?



3 core elements

Performance

Actions implemented by the organisation improve environmental performance and ensure legal compliance, in line with key policy targets such as the EU Green Deal and the Paris agreement on climate change.

Transparency

Achievements are made public through the annual environmental statement.

Credibility

The environmental statement is validated by independent environmental verifiers who guarantee the value of the information disclosed.

Key performance indicators versus doability/relevance



X	BIODIVERSITY/ LAND USE	tenants in a listed building in the middle of the city
X	WATER	costs known, no direct correlation with our consumption
*	EMISSIONS	2019 3.6 million flight kms, 1.1 million kms by the staff, besides the decision NOT to fly, limited options
	WASTE	new cleaning contract / recycling / records in place
	ENERGY EFFICIENCY	electricity supplier, radiators map, lights etc good measures, yet performance with a time lag
	MATERIAL EFFICIENCY	awareness raising and purchase practices incorporation of SUSTAINABILITY CRITERIA = key action

New energy efficiency measures - LED lighting

- Research and 3w testing (light intensity, color, comfort)
- Replacement of 165 old fluorescent tubes (5th floor) with LED
- Waste disposal in cooperation with manufacturer



Characteristics of new LED:

- Highest A++ class 55% more efficient
- No flickering and right cool white colour
 (4000K) ideal for offices
- Average duration: 60 000 h and 5 y
 guarantee (3 times more than old, > 15 years)
- Adjustable position (up to 160° angle)

Verbrauchsentwicklung 2019/ 2020 Monatliche Verbräuche (kWh)					
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2.500	ال مواليات				
2.000	######################################				
1.500					
1.000					
500					
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Costs / savings / PBP

Tubes 60cm (pcs)	62
Tubes 150cm (pcs)	103
Electricity price - last bill (eur)	0,20
Average working hours of bulbs (h)	5
Consumption per year kWh OLD (kWh/y)	9217,0
Annual costs OLD (EUR)	1845,2
Consumption per year NEW (kWh/y)	3724,5
Annual costs NEW (EUR)	745,6
Annual savings KWh	5492,5
Annual savings EUR	1099,6
Investment costs for purchase of new LED tubes (EUR)	2000,0
Payback period (years)	1,8
Addition savings due to 3 x greater lifespan (cover instalation costs)	716,3

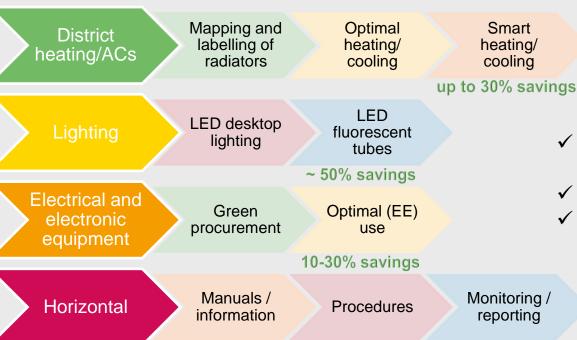
Next steps:

- > Testing corridor light optimisation and control (by light intensity, duration)
- > Split light switching in some offices
- > Integration of lighting in smart app

Other Energy Efficiency related measures



Secretariat's energy costs: 69% district heating, 31% electricity!









Smart heating system:

- ✓ Humidity increased + 10% (now close to 40%)
- ✓ New manual in Easy app
- ✓ Testing of cooling integration

Equipment consumption / optimization:







