

Energy management through measurement
THE IMPORTANCE OF METERING.

Ian Ryan: Field Operations Manager

ResourceKraft is an Energy Management technology company, headquartered in Ireland with operations in the United Kingdom, United States and Canada.

Agenda

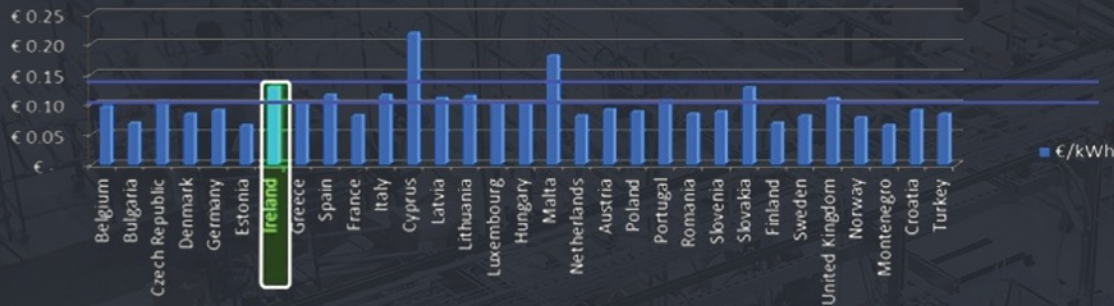
- *Why monitoring and measuring energy is a good idea*
- *How can this be done at a reasonable cost and minimal effort*
- *Case studies on how energy management delivers*



Energy Costs - 20% Higher than UK

2012

Commercial Electricity Costs Europe



2nd Largest Single Cost After Labour

Largest Uncontrolled Cost

A Competitive Disadvantage

€/Gigajoule



Energy Management



Industry:

- Rising energy costs
- Government regulation & industry standards



Corporate:

- *Managing energy across multiple buildings and locations*
- *Multiple utility suppliers & tariffs*
- *Billing*
- *Cost allocation*



Operations:

- *Manually read meters*
- *Measurement & verification*
- *Generating reports*
- *Managing costs*

Why Manage Energy?

- *Rising Energy & Water Costs & Need For Efficiency*
- *Incurring Excess Charges*
- *Managing Multiple Utility Suppliers*
- *Managing Energy Across Multiple Sites*
- *Bill Verification & Manual Reading of Meters*
- *Allocating Costs within Organisation*
- *Metric Reports (need for timely & accurate data)*
- *Process Management - ISO 50001, LEAN, SixSigma*
- *M&V Requirement Energy Performance Contracts*
- *National Energy Efficiency Action Plan – 2020*

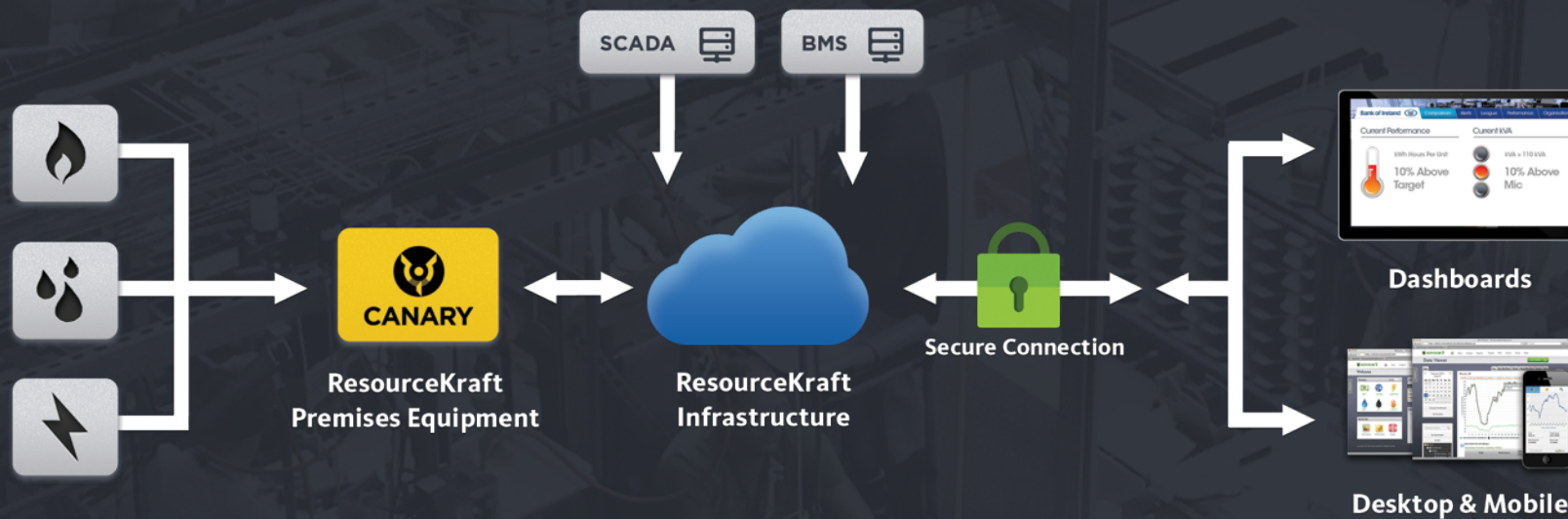


How?

- *Achieve senior management buy-in*
- *Measure*
- *Get initial benchmark*
- *Do the research and prioritise changes*
- *Make the changes*
- *Measure and Benchmark your achievements*
- *Promote your achievements*
- *Set new targets*
- *Go back to 4*



Electricity, Water, Gas Utility Meters
Environmental Sensors



Savings: Where our Customers Save Money

- ***Targeting & reducing base loads***
- ***Eliminating over-billing - Remove estimates readings***
- ***Avoiding excess charges such as:***
 - *Breach of MIC*
 - *Excessively set MIC*
 - *Wattless power – Power Factor*
- ***Tariff analysis:***
 - *Understand impact*
 - *Procurement – use information to get better deals*
- ***Involving the whole Organization (unlimited user access):***
 - *Energy Awareness Campaigns*
 - *Use of Public Displays/Dashboards*
 - *Changing Behavior*
 - *Apportioning Responsibility*
- ***Project Benchmarks: 12 month Payback on Capital Expenditure***



Measurement: Feedback loop





Case Studies

Water Utility Mayo County Council

“From the data gathered by ResourceKraft and presented to us on their M&T system Advisor, we have managed to significantly reduce the annual running cost of our pumping station at Lough Mask.”

Kieran Shally
SEE Water Services, Mayo County Council



Comhairle Contae Mhaigh Eo
Mayo County Council

Results

No. Sites:	2
Average Site Spend:	€5,700
Installation Time:	4 Days
Installation per Site:	2 Days
Forecasted Year 1 Savings:	€139,000
Payback period:	6 months

Project

Software:	Advisor
Metering:	Water
	Electricity

Meat Processing Plants

Significant costs to business. Required to manage 6 sites in a large multi-national. Management agreed metrics and targets, required comprehensive suite of standard and customised reports:

- *Production*
- *Site Comparison*
- *Temperature*
- *Cost analysis and reporting.*
- *Corporate Key Process Indicators (KPIs)*

Deployed comprehensive metering and imported production data.



Results

Ability to set targets and alarms, “deep dive” to line issues. Immediately identified water issues at all temperatures:

- *Up to 50% reduction in hot water use*
- *A complete return on investment within year 1 of installation*
- *On-going savings >10%*

Summary

- *Energy costs in Ireland are high*
- *Your energy costs are based upon*
 - *1) How well you reduce usage and*
 - *2) How well you manage your suppliers*
- *You must measure – no choice!! Energy is no different to any other business input. Would you blindly pay employee expenses?*
- *Energy measurement and management does pay off. Less than 1 year ROI with ongoing returns*
- *It does not work without management buy-in – this cannot be outsourced*



Thank You!