The Facility Manager and Energy Efficiency

Pat Mehigan UCC Energy Manager
20,700 registered students

2,800 academic, research & administrative staff

130,000 alumni worldwide

13,972 undergraduates

4,390 postgraduates

3,317 international students from 104 countries

2,739 adult and continuing education students

TOP 2% in the world

>€90 m research income

€290 m annual income
130 Buildings

50% Energy produced on site

240,000m² Size of the estate

€2 m Allocated to energy projects over the next 5 years

€4m Energy spend

1st in the World

1st ISO 50001 University

4th In the world for green ranking of Universities

University Green campus

13 Buildings consume 87% of the energy

University College Cork, Ireland

Coláiste na hOllscoile Corcaigh
Lots done – more to do
The glory days of BMS

OS46
TI45
SP20
C21
S
Q
What is FM

“FM is the integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities”

BIFM 2006.
FM and Energy Efficiency
FM and Energy Efficiency
Plant

- What and why?- Challenge

- Housekeeping

- Investment
Its was all about the plant
Block A Process Cooling Water Primary Side

Cooling Load: 41.63

Fan No.1: Enable Status
Fan No.2: Enable Status
Fan No.3: Enable Status
Fan No.4: Enable Status

Dry Cooler Control Setpoints
OA Max Temp Spt: 17.00 °C
OA Min Temp Spt: -10.00 °C

Outside Temp: 11.44

Control Valve Override: 20.00
Valve Override Position:

Temperature:
- 25.05
- 19.40
- 21.67
- 22.52

Setpoint: 22.00
Temperature: 21.97

To Block C Chilled Water Generation
To Block A Sub Fab Cooling Pumps

Cold Deck
Hot Deck

System Enable: 1
Process

- I love ISO
- Project design – think long term
- Focus on top SEU’s, rest will follow
- Investment ranking
- Saver saves

30 year cost of a building

- Building costs
- Operational
- Salaries
Its was all about plant and process.
“A case study of energy management and awareness across 6 public bodies with a focus on the engagement of management and employees in reducing energy wastage.”
• Lets look at the chart again

• Can you imagine the potential consequences or savings?
People

- Making it the norm.
- Moments of change / disruption
- Management Commitment
- It will happen (but slower than the light bulb)
Now we're talking

Annualised Energy Consumption kWh

- Actual consumption kWh/year
- Annual consumption without program

[Graph showing energy consumption trends from December 2005 to December 2014]
Putting the art into Energy Savings

The Glucksman, UCC’s award winning art building, have managed to reduce their energy consumption by a whopping 29%.
My Experience

- Process
- Plant
- People