



# **Welcome to the AEE Ireland Webinar**



**ENABLING ENERGY EFFICIENCY**

**More is  
possible!**

# About us

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WE MOBILISE ENERGY EFFICIENCY PROJECTS



MULTI AWARD WINNING BUSINESS



UNIQUE BLEND OF EXPERTISE

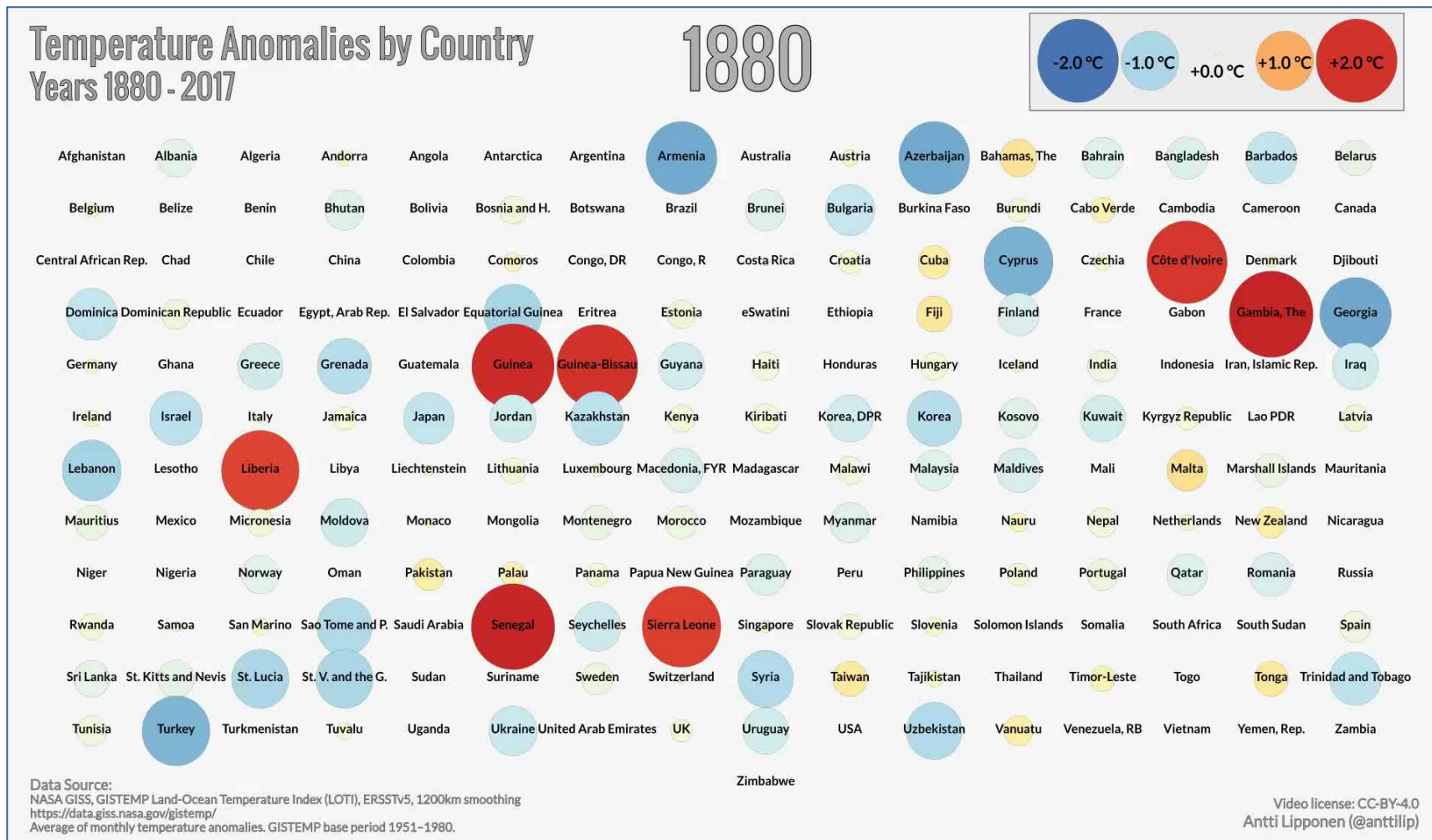


PROVEN FRAMEWORK APPROACH

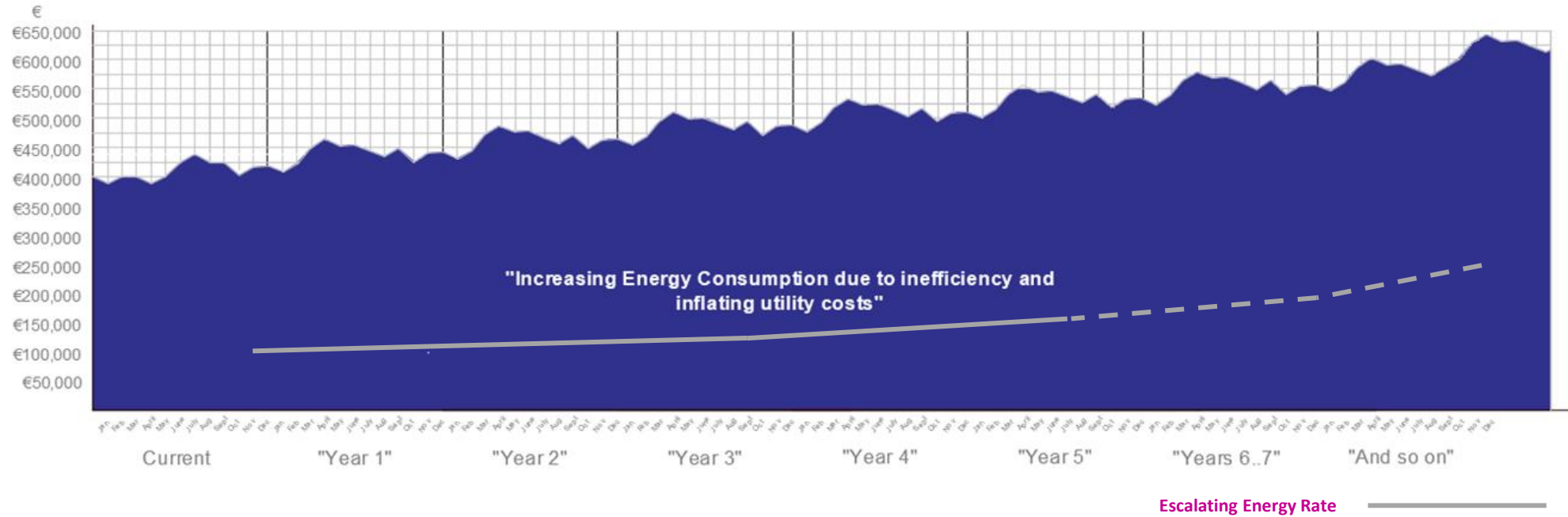


BROAD SCOPE

# 35s Pause for Reflection:



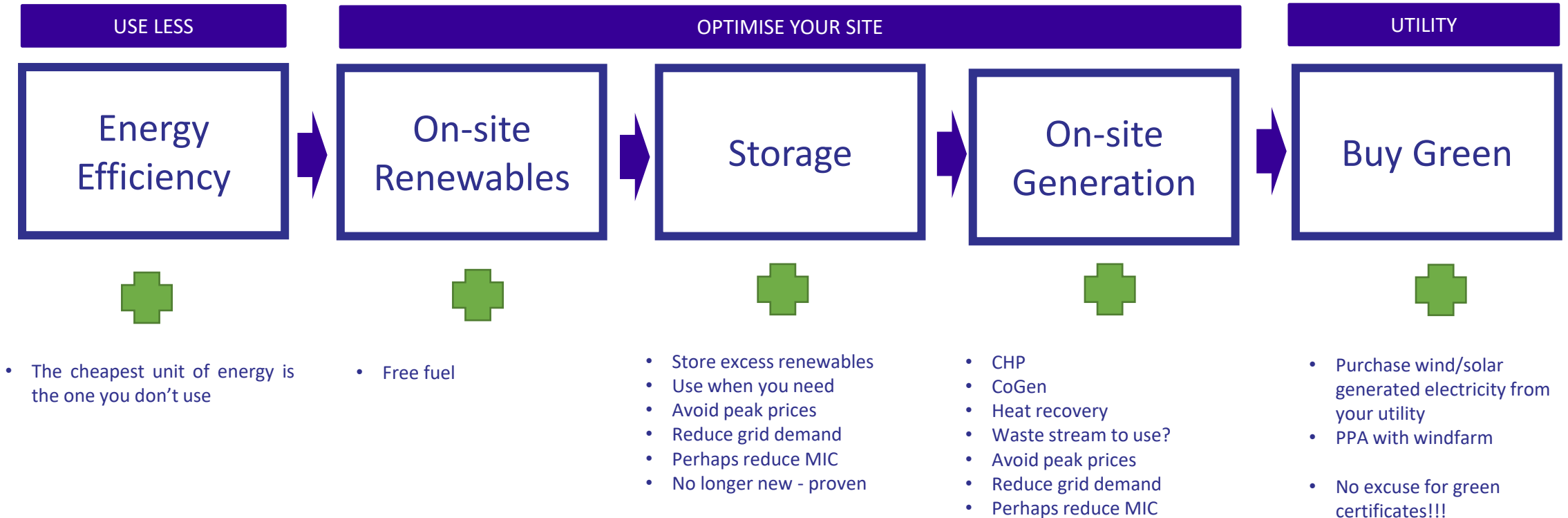
# The cost of doing nothing



Doing nothing is expensive!

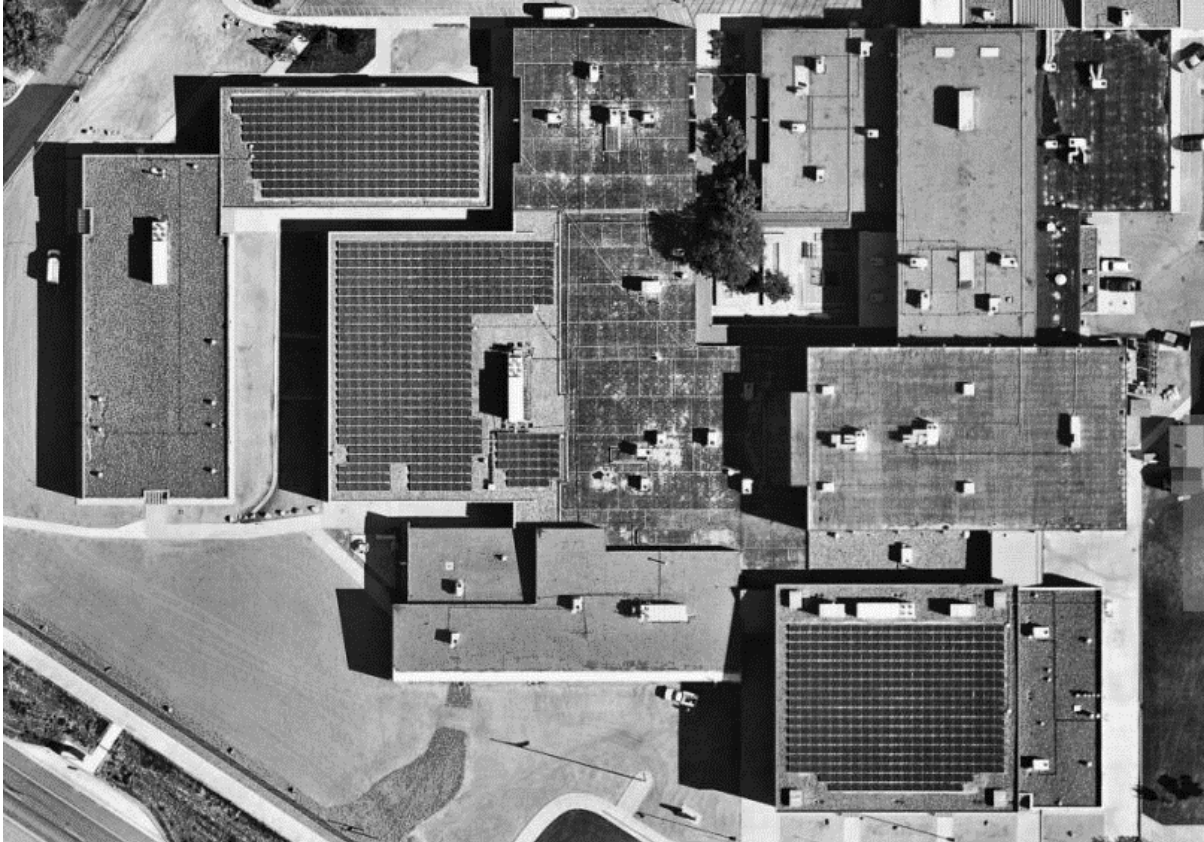
# Efficiency First

There are range of options for businesses to improve your energy consumption - whatever you measure!



Vivid Edge's model is to complement not replace capital budgets, so you can do more

# Campus-wide programs



## Sample Measures

Heating/Cooling/Refrigeration systems  
Extract, Pumping & other  
Motor/Drive systems,  
Compressed Air Systems, Vacuum Systems,  
Conveyance Systems, Control systems,  
Process Water systems and  
Water Treatment system retrofits.

We support behind the meter migrations to more sustainable energy sources that not only reduce the carbon footprint but will increase their profit retention, operating resilience and autonomy.

# Sample applications



Office Facilities, Call Centres	Data Centres	Telecom/Network
<b>Public Buildings</b> <small>Offices, Depots, Hospitals, Libraries etc.</small>	<b>Process / Manufacturing</b>	<b>Hospitals</b>
<b>External Street/Road / Fleet</b>	<b>Waste Management</b>	<b>Public Employees</b>
<b>Sample Measures</b>		
<ul style="list-style-type: none"> <li>➤ Alternative/Renewable Energy. Solutions (CHP, District Heating/Cooling, Solar)</li> <li>➤ Autonomy enhancements</li> <li>➤ Automation/Monitoring/Metering</li> <li>➤ Boiler Retrofit</li> <li>➤ Building Envelope (Insulation, Fenestration)</li> <li>➤ Chiller Retrofit</li> <li>➤ Conveyance Systems</li> <li>➤ Dynamic Thermal Management</li> </ul>	<ul style="list-style-type: none"> <li>➤ Electric Vehicle/ Charging stations</li> <li>➤ Heat Pump</li> <li>➤ Heat Recovery Solutions</li> <li>➤ High Efficiency Motors &amp; Drives (VSD)</li> <li>➤ High Efficiency PSU</li> <li>➤ HVAC / Extract Systems</li> <li>➤ Hybrid solutions</li> <li>➤ Infrastructure Upgrades</li> <li>➤ LED Lighting Upgrades</li> <li>➤ Process Cooling, Chilling and other Refrigeration Systems, Compressed Air Vacuum/Extract</li> </ul>	<ul style="list-style-type: none"> <li>➤ Remote Interface Controls</li> <li>➤ Steam/Process Heating/Boiler upgrades</li> <li>➤ Storage solution for demand shifting (Batteries/Thermal Buffer)</li> <li>➤ UPS banks - Migration from VRLA to LI-Ion (or long life VRLA)</li> <li>➤ Localised Solar Photovoltaic (PV) to supplement imported energy</li> <li>➤ Micro back up Generation 48V DC</li> </ul>
<b>Benefits</b> <ul style="list-style-type: none"> <li>• Sustained Savings...</li> <li>• Reduced capex burdens and operation costs...</li> <li>• Increased Energy Efficiency, Operating Resilience and Energy Security...</li> <li>• Smoother Operations and Increased Ability to meet changing needs...</li> <li>• Reduced Emissions...</li> <li>• Meets Environmental Goals</li> </ul>		

# Expectations

## A Broad Range of Measures Estimated % Energy Savings Range

Boiler Retrofit/modularise	15% - 30%
Chiller Retrofit	20% - 30%
Free Cooling	15% - 65%
Heat Recovery	10% - 50%
HVAC Upgrade	20% - 50%
LED Retrofits	50% - 85%
VSD/Invertors	15% - 50%
Envelope	5% - 50%
Energy-efficient district heating or cooling	10% - 25%
BMS, Metering, Monitoring, IOT solutions etc.	
Combined solution comprised of two or more measures	

## Samples



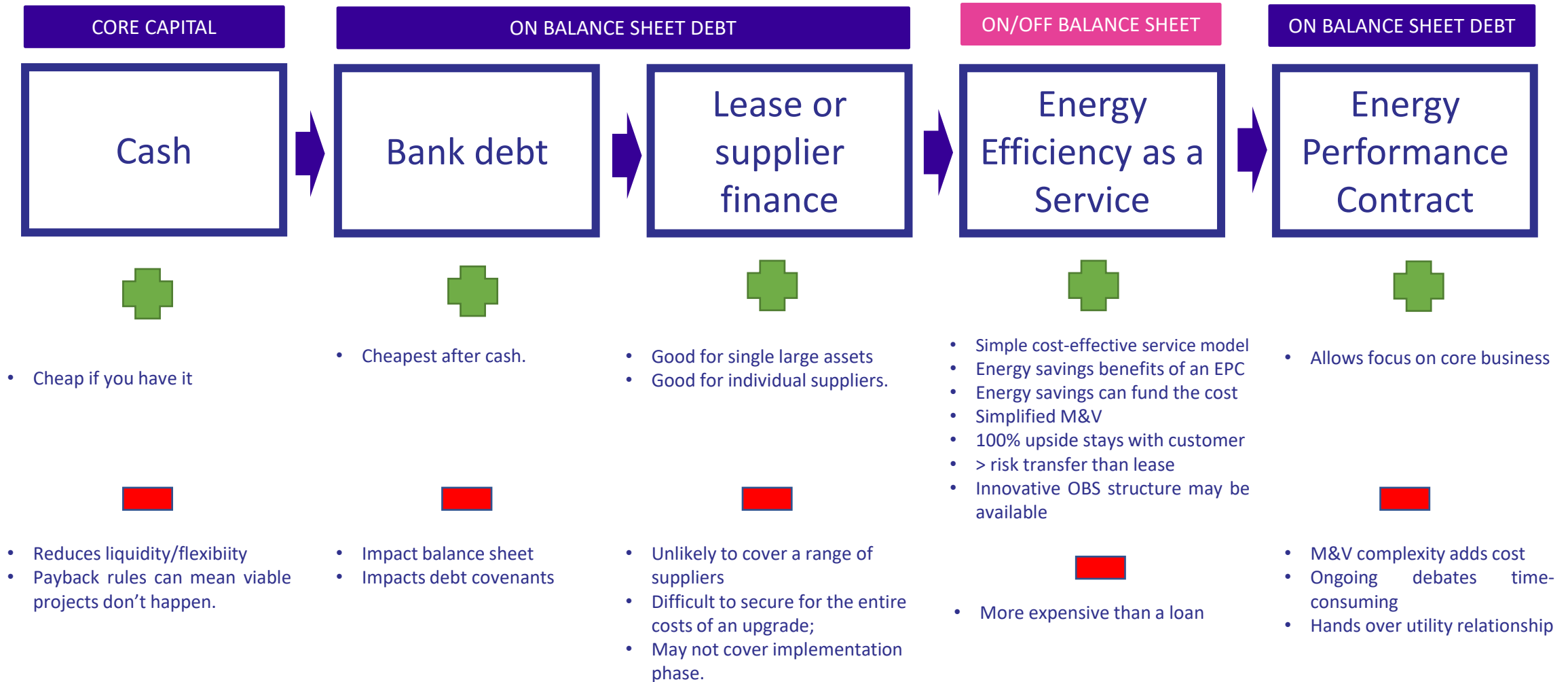
## Technology Considerations

- ✓ Type of application.
- ✓ Business operation criticality.
- ✓ Performance characteristics (efficiency, efficacy etc.).
- ✓ Manufacturer reputation.
- ✓ Equipment resilience, quality and durability.
- ✓ Whether technology meets minimum quality criteria.
- ✓ Savings/Recurring savings potential.
- ✓ Cost / Savings to investment ratio.

# Funding model comparison



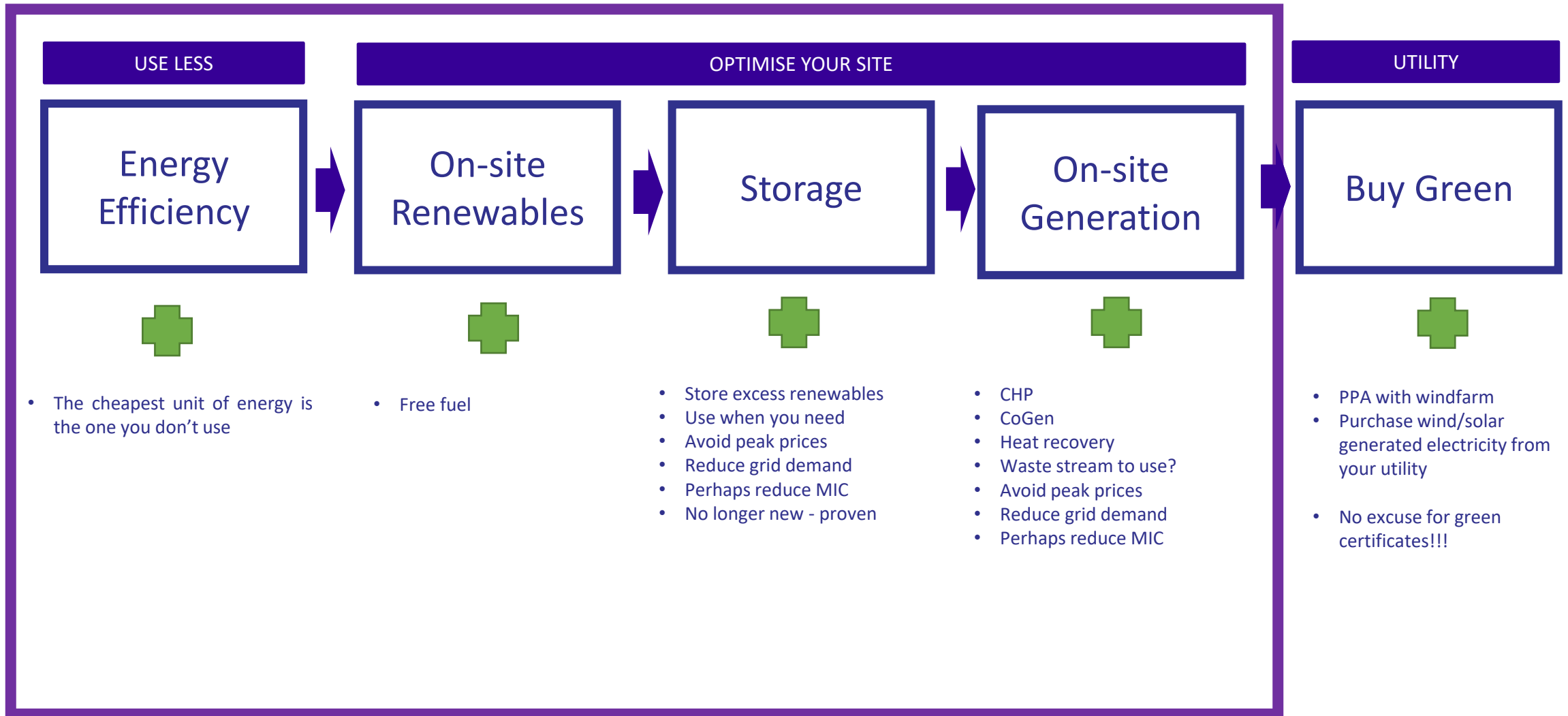
There are range of options for businesses to fund energy efficiency upgrades



Vivid Edge's model is to complement not replace capital budgets, so you can do more

# And it works for all of these:

There are range of options for businesses to improve your energy consumption - whatever you measure!



Vivid Edge's model is to complement not replace capital budgets, so you can do more

# Example - 8 year service contract



Indicative business case for a sample project:

## High level business case

FM assumptions:

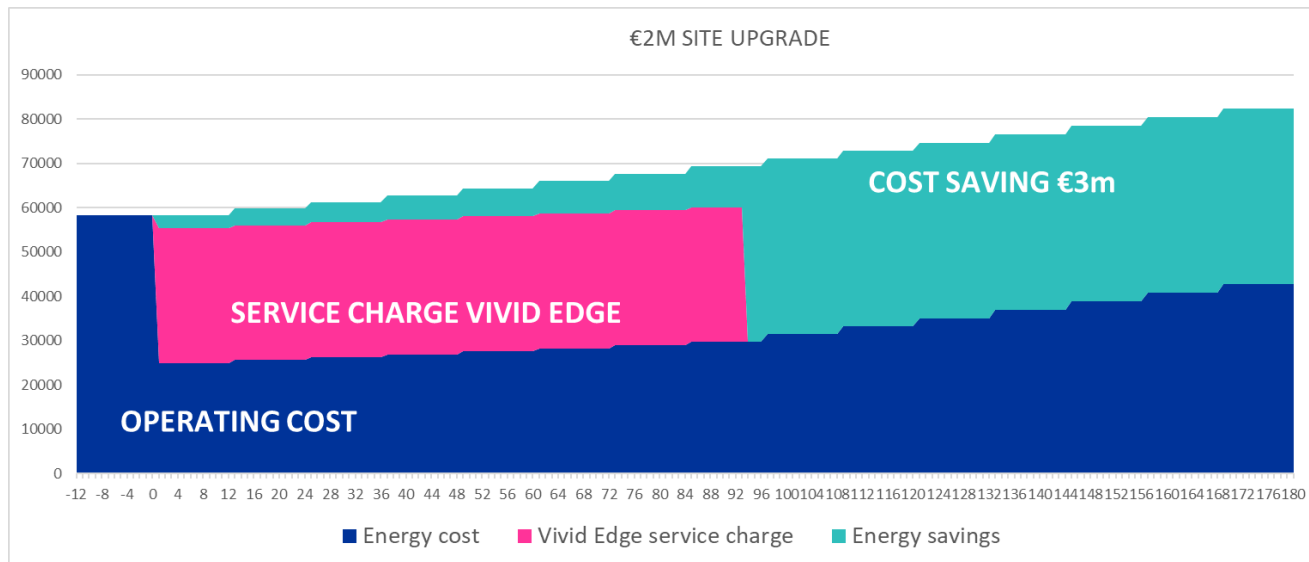
- Capex per site €2m
- Saving per site €400k

Additional Vivid Edge assumptions:

- Annual energy costs pre-measures €700k
- Equipment useful life 15 years

## Benefits

- ✓ 100% funding from Vivid Edge from project initiation through service contract PLUS:
- ✓ Off balance structure designed by Vivid Edge with significant risk transfer to Vivid Edge
- ✓ Technical and financial accounting supports included
- ✓ Proven framework approach to manage multiple countries and locations in a single agreement



## €2M SITE UPGRADE

### 8 Year Service Contract

	EUR	EUR
	Monthly	Annual
Efficiency savings	33,333	
Service payments to Vivid Edge	30,432	
Net (cost)/benefit	2,901	34,811
<b>8 YEAR SERVICE TERM cumulative (cost)/savings</b>		<b>278,484</b>
Savings remaining useful life 7 years		2,800,000
<b>Total savings over useful life</b>		<b>3,078,484</b>

# Who is it for?

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- 1 Large energy users
- 2 Public or private
- 3 Ambitious about reducing energy costs and/or carbon footprint and/or GHG emissions
- 4 Single location, single project through to multiple projects in multiple countries

**More is possible**

# Vodafone Ireland Energy Challenge

Presented by Mark Lynchehaun  
25<sup>th</sup> August 2020



# Vodafone Ireland Energy Challenge

**Our Targets** | We published our targets to source 100% renewable electricity and reduce our GHG emissions by 40% (2025 vs. 2017)

**2025 goals**

- 100% renewable electricity supply
- 40% reduction in GHG emissions (against a baseline of our emissions for the 2017 financial year)

To deliver this in a credible way we need all of the below:

1. Optimising our energy consumption
2. Investing in our own renewable generation
3. Sourcing renewable electricity from generators via Power Purchase Agreements (PPA)
4. Sourcing Renewable Electricity Certificates (REC)



# Our Strategy and Roadmap

Energy Policy and Governance

Energy Targets and Road Map



Mobile  
Access  
Network (57%)

Fixed  
Access  
Network (8%)

Core  
Network  
(19%)

Data  
Centres  
(9%)

Office &  
Retail  
(7%)

Energy Supply & Risk Management (SCM)

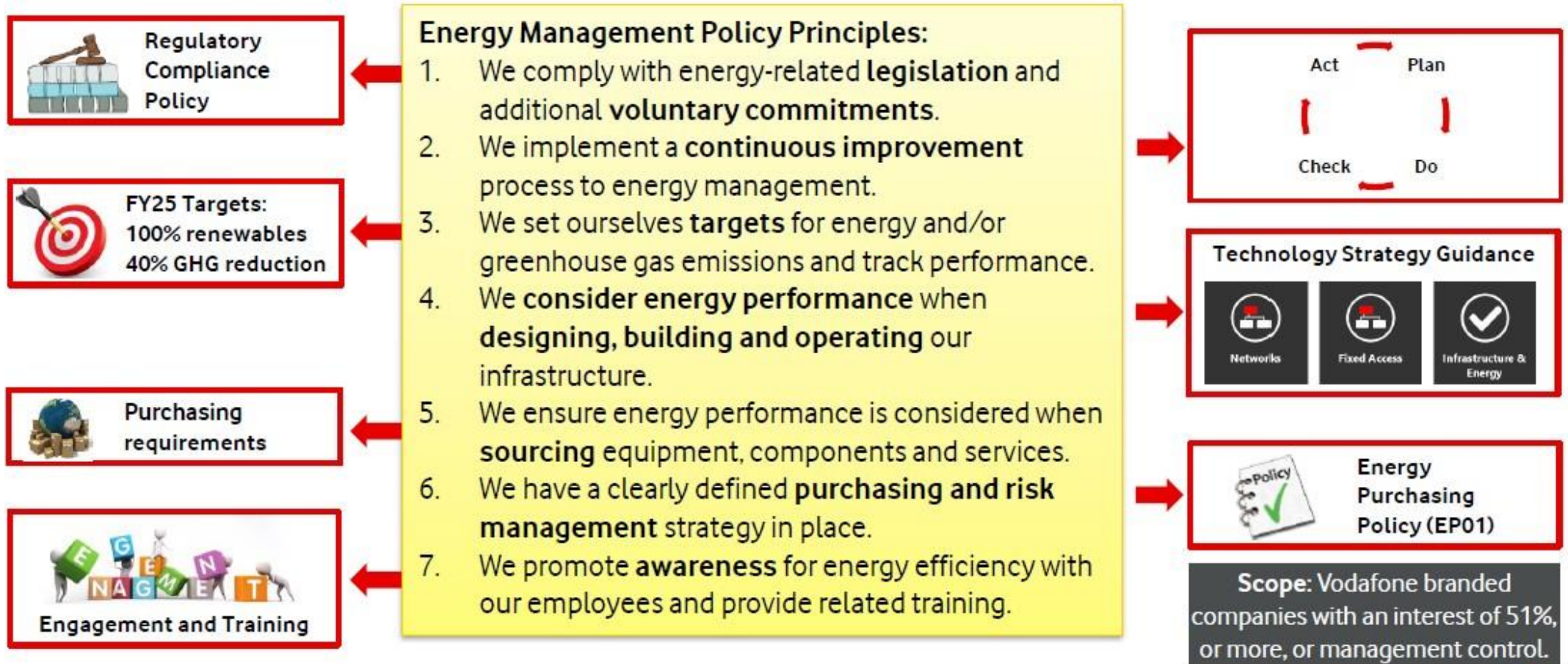
Energy Shared Services (TSS)

Energy Engagement & Behavioural Change



# Vodafone Ireland Energy Policy & Principles

The energy management policy principles define minimum requirements.



# Vodafone Ireland Energy communications & engagement

## #RedLovesGreen



#RedLovesGreen campaign launched & sponsored by Johan

SCM Energy Matters makes energy assessments **mandatory** for RFI/Q

Global Energy Gurus to be launched Dec 2018

#RedLovesGreen Workplace group has 1,300 followers



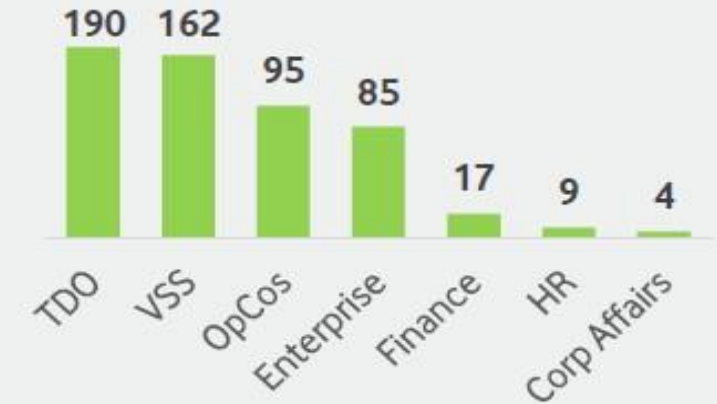
**Johan Wibergh**

August 31 at 6:02 AM · 📱

It's very important that we are efficient when it comes to energy. I'm committed to being energy efficient in Vodafone and I am proud to be the Energy Sponsor of [#RedLovesGreen](#)



562 People completed *Energy eLearning*



### WE NEED YOU!

- To join [#RedLovesGreen](#)
- Complete [Energy eLearning](#)
- Speak to your [Senior Leaders](#) about #RedLovesGreen
- [Get involved](#) in local campaigns



# Vodafone Ireland Energy communications & engagement



Help us achieve our 2025 goals

## What can you do?

Please consider how your decisions will impact our energy footprint



### Leadership

Implement ISO 50001 or equivalent

Set energy targets

Lead by example



### Engineering

Apply technology strategy guidance

Remove legacy equipment



### Operations

Activate power saving features

Fix energy wasting faults

Work with Energy Shared Services



### Supply Chain

Include energy KPI in RFQ

Assess Total Cost of Ownership (TCO)



### Finance

Assess energy impact in business cases

Consider more efficient option to reduce TCO

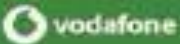


### Office & Retail

Switch off equipment

Reduce printing

Activate power save modes

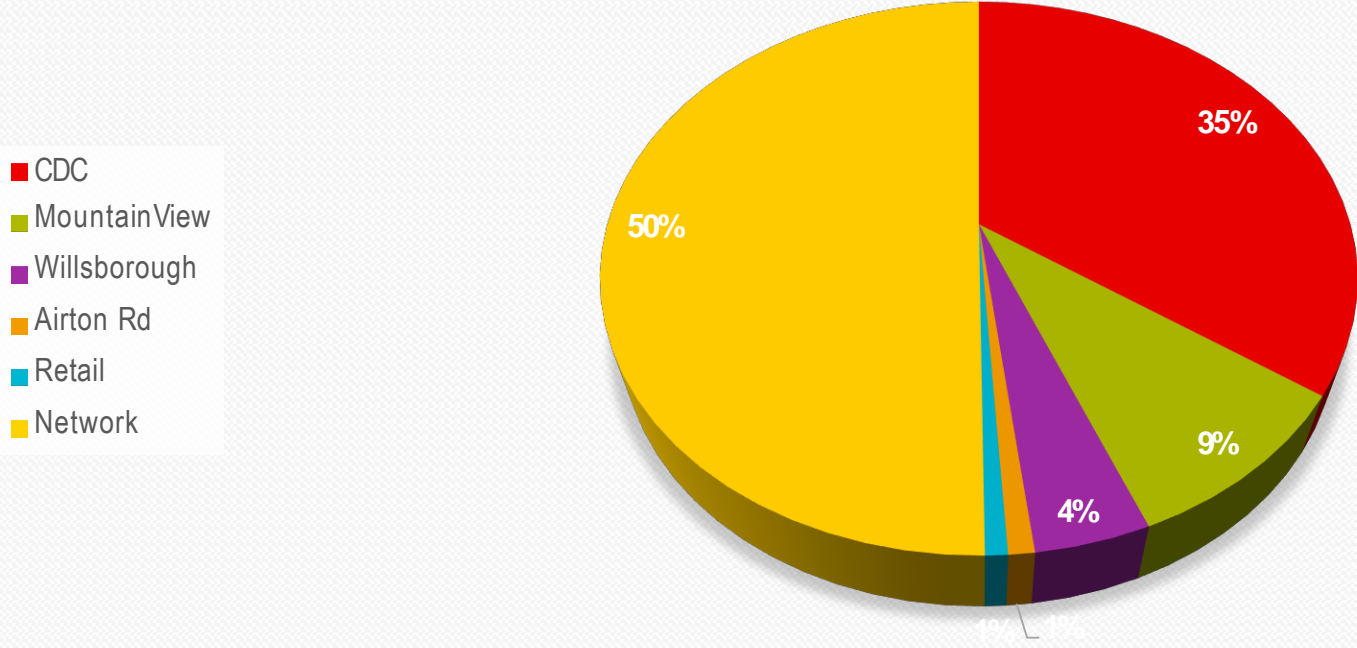


#RedLovesGreen



# Vodafone Ireland Energy Stakeholders

Vodafone Ireland (kWh Breakdown)



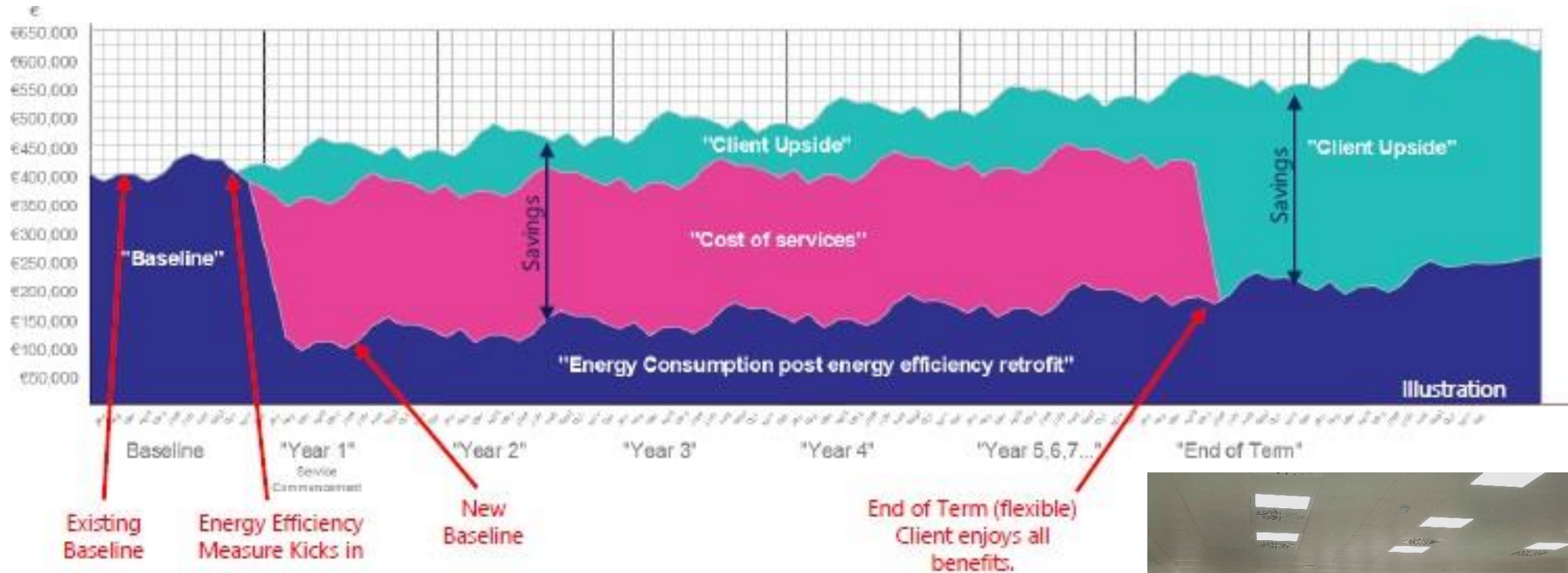
**VODAFONE IRELAND LIMITED HOLD ISO 50001 ACROSS OUR ENTIRE ESTATE**

**VODAFONE IRELAND ENERGY BILL FOR FY20/21 IS PROJECTED AT €10.3M**

**CAPITAL INVESTMENT PROGRAMME ALIGNED TO RESILIENCE, EFFICIENCY AND REALIGNMENT OF PROPERTY PORTFOLIO**

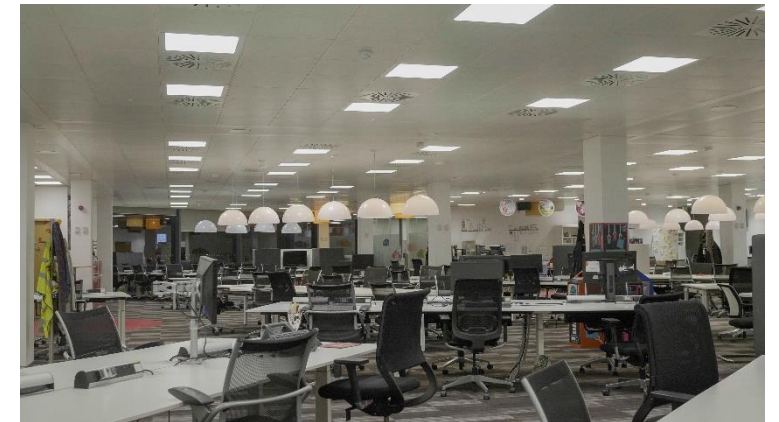


# Energy as a Service



## Risks mitigated ✓

- Savings offset increased energy costs, carbon taxes etc.
- Increased efficiencies, competitiveness and profit retention.
- Increase operational resilience.
- Reduced environmental impact.
- Peace of mind.



**QUESTIONS ?**





**Thank you and Stay Safe**

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and LinkedIn**