



CLASS

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Future Networks Engineer



Agenda



CLASS

Customer Load Active System Services



What is CLASS

Technology overview



Customer
engagement approach



Customer learning



“

*Is seeking to demonstrate
that
electricity demand can be
managed
by controlling voltage...*

...without any discernible
impacts on customers

”



Customer Load Active
Systems Services

Back to school for a moment...



electricity
north west

Bringing energy to your door

This fundamental relationship is
at the heart of CLASS

But how will it change over time
as customers
adopt new devices?

How could we use this
relationship in a smart
way to benefit customers?

*voltage is proportional
to demand*

*if voltage is increased
demand increases*

And vice versa . . . !



How does it work



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00:03:00

2%



00:00:08



2%

The cost £ to make your cup of tea is always the same!

*“A problem shared
is a problem
halved...”*

20,000 homes in a town

200,000 homes in a city

26 million across the GB

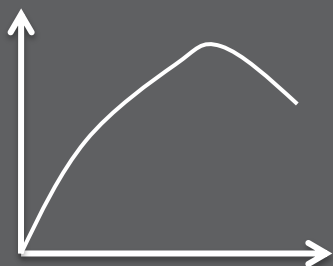


What problems could we solve ?

CLASS proposes to harness thousands of tiny changes at just the right time



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**2% decrease in
demand at peak
times**

Lower network costs
Faster connections



**2% decrease in
demand**

Lower balancing costs
Reduced carbon



**2% increase in
demand**

Lower energy costs

Today

High peak demand

Tomorrow

Response and reserve

Future

Wind following

Our structure and partners



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SIEMENS



nationalgrid



Technology
build

MANCHESTER
1824

Tyndall°Centre
for Climate Change Research



Chiltern Power

nationalgrid

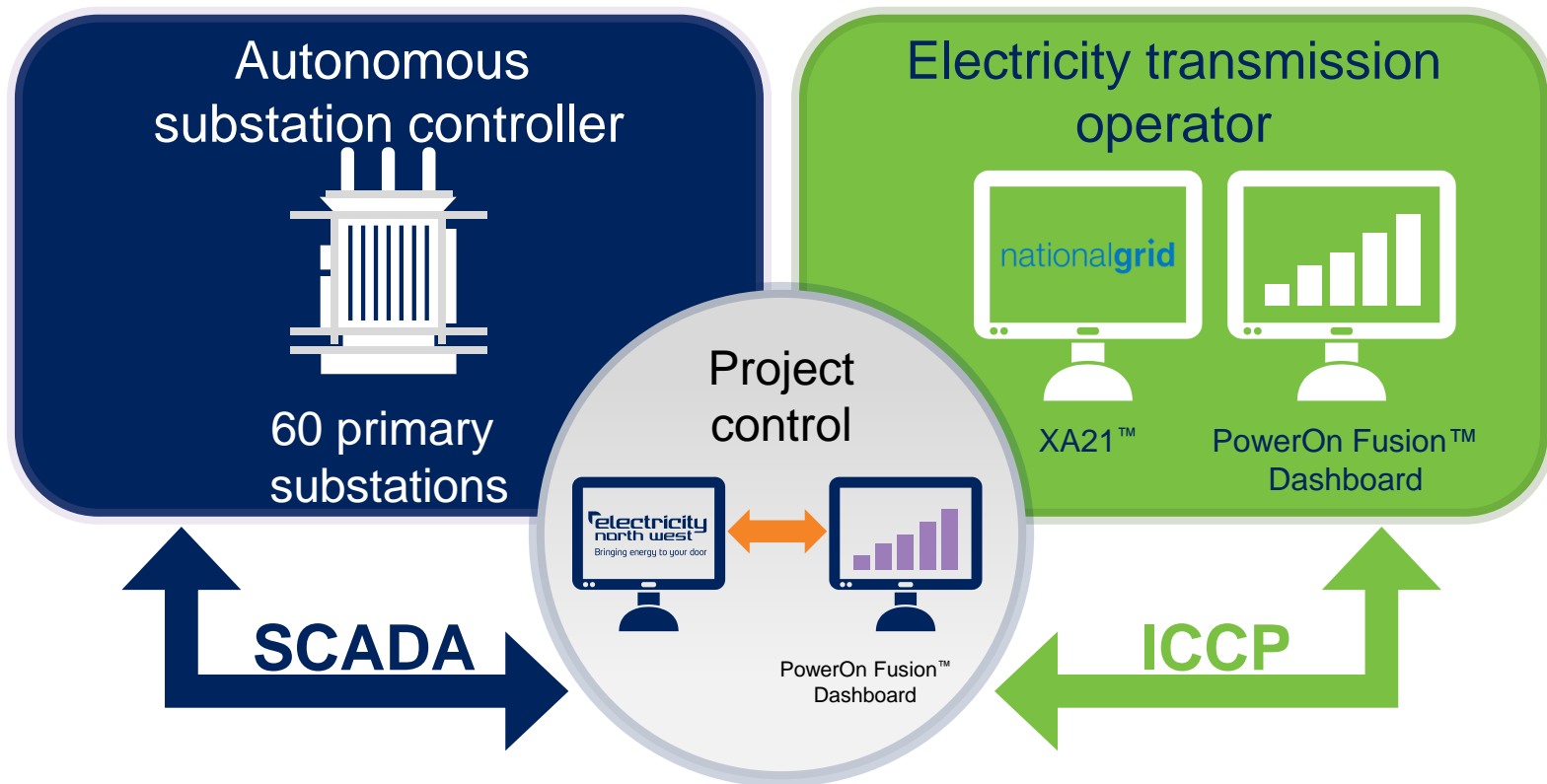
Trials and
research

Impact
Research

Customer
engagement

Learning and dissemination

CLASS system overview



The customer challenge



“CLASS will be indiscernible to customers”

Customers will not see / observe / notice an impact on the supply quality when these innovative techniques are applied



Customer



Supply
quality



Innovative
techniques



“CLASS will be indiscernible to customers”

Customers will not see / observe / notice an impact on the supply quality when these innovative techniques are applied

Qualitative



Formulate
communications
and materials

Customer
research



Quantitative



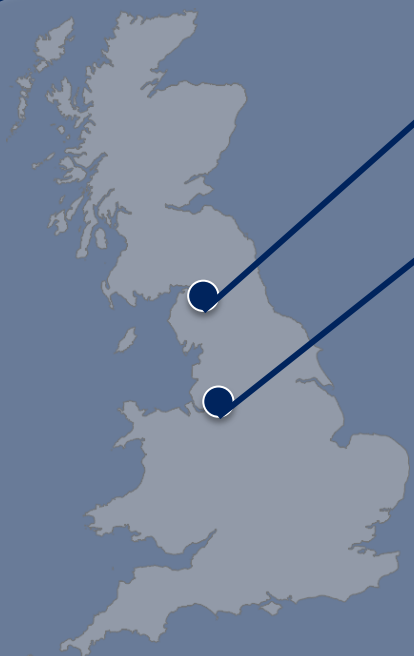
Compare
feedback
trial vs control

Engaged customer panel methodology



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Carlisle

Manchester

Four meetings as
appropriate

Cross section
of customers

All I&C panellists
had decision-
making
responsibilities



30 consumers were recruited

Engaged customer panel – leaflet



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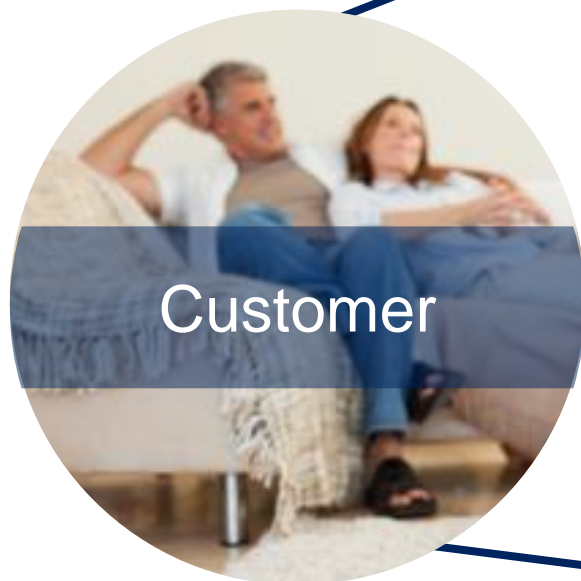


How customers get involved in the survey and get the cash reward



Priority
Services
Register

Customer leaflet and survey registration



Customer

3551 registrations 22 Feb – 3 March

354



3317 online



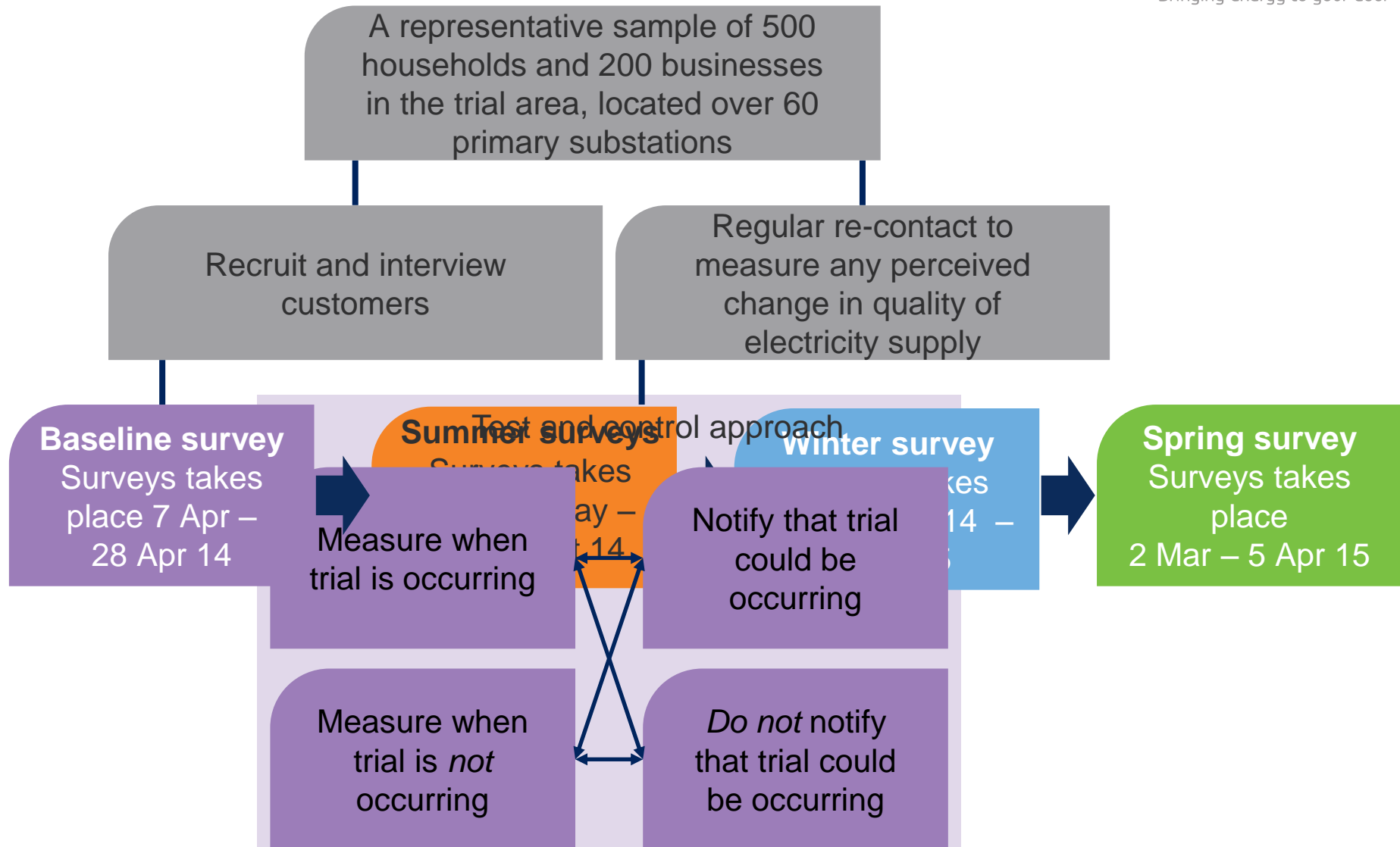
CLASS website

‘Due to overwhelming response,
registration for trial surveys is now closed’

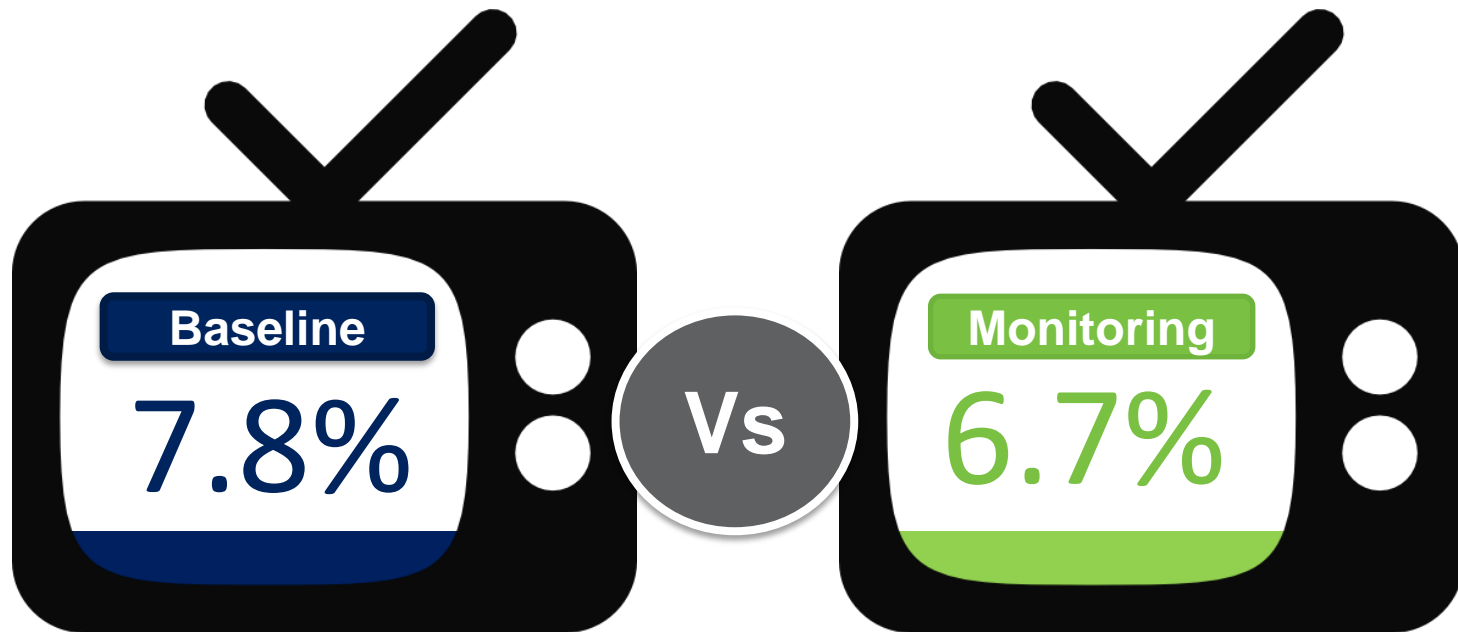
Impact Research

Recruitment of 700 participants
of a representative mix of customers

Quantitative research summary



Early Results- Appliances working less effectively



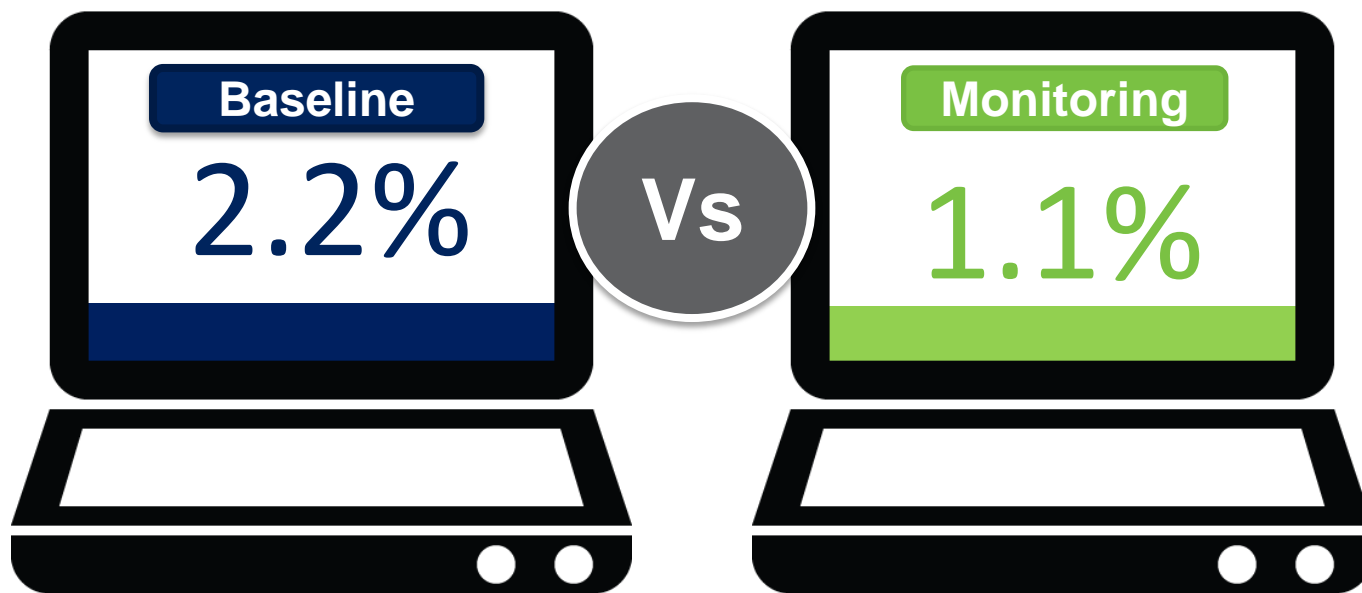
Number of customers who said 1 or more of their appliances were working slower / less effectively in the last 7 days

NO STATISTICALLY SIGNIFICANT CHANGE

Early Results - Appliances working faster/ more effectively



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Number of customers who said 1 or more of their appliances were working quicker /more effectively in the last 7 days

NO STATISTICALLY SIGNIFICANT CHANGE

Priority service customers



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Already registered



Eligible for inclusion



Identify PSR
customers and any
special needs

Vulnerable customers reside
at the property and/or if
medical equipment affected



Power quality
monitoring

In summary



Innovative Technique

Viability in scaling CLASS

Technology
and Trials

Test the key technical
hypotheses

No noticeable effects
on customers

Customer
engagement

Test whether this holds
for a variety of
customers



Want to know more?



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	@ElecNW_News
	linkedin.com/company/electricity-north-west
	facebook.com/ElectricityNorthWest
	youtube.com/ElectricityNorthWest

Thank you for your time and attention



QUESTIONS

&

ANSWERS



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