telemetry
smart monitoring
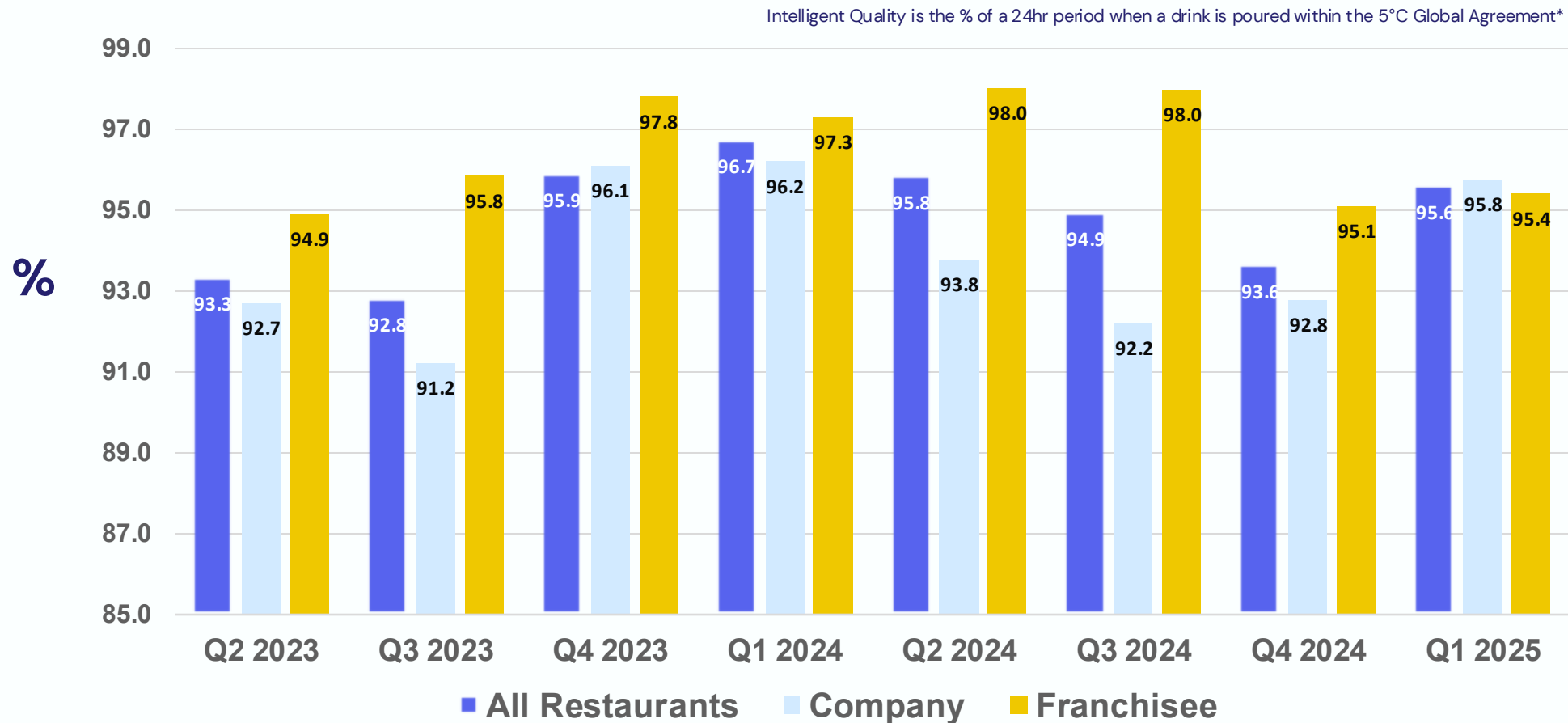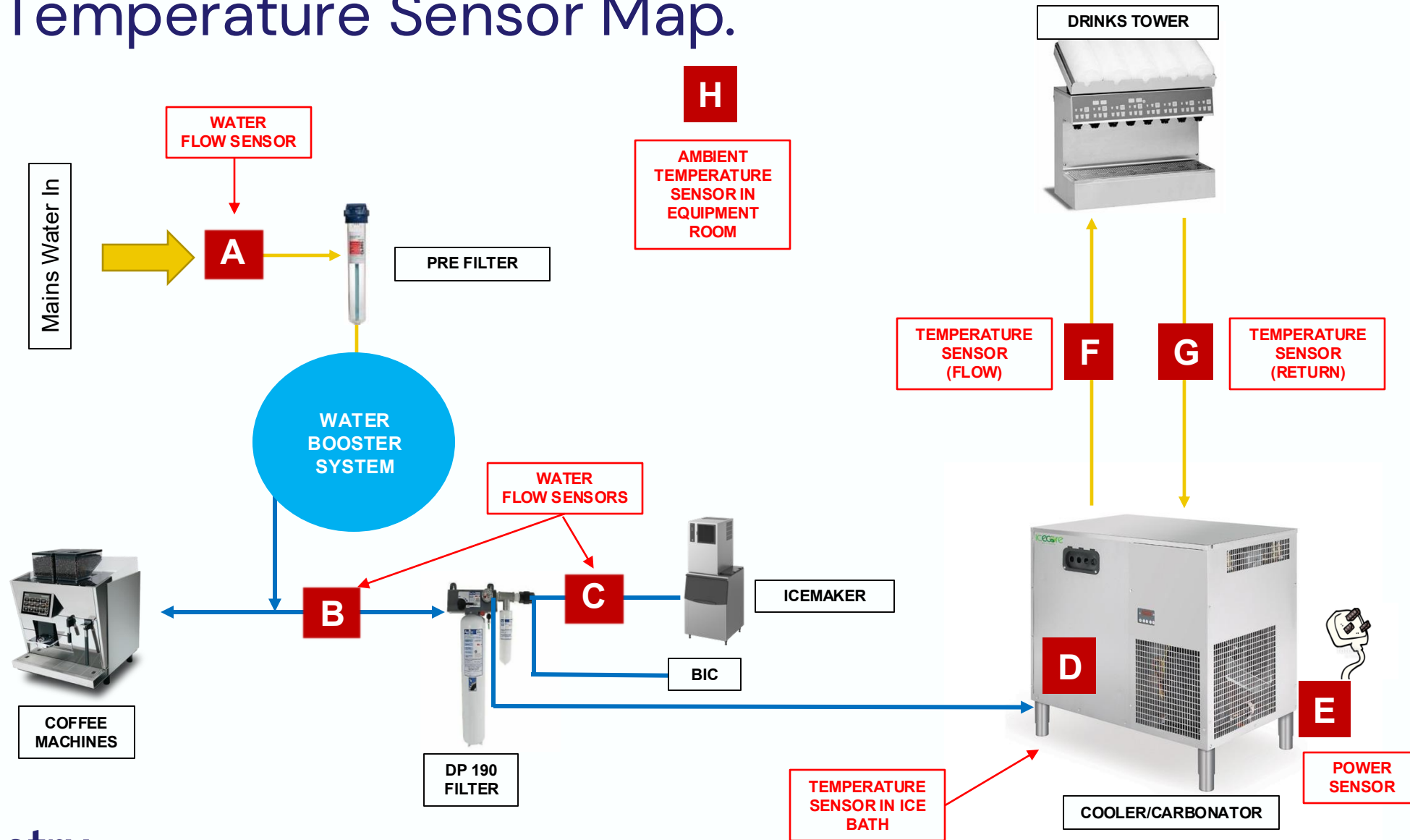
Franchisee Introduction

Background.

- Rolling 12mth soft drink score across the McDonald's UK estate is currently only **84**
- That's approx. **100m** drinks served poorly every year*
- It's the worst in Western Europe

- Telemetry started testing remote monitoring sensors in McDonald's Restaurants back in 2017 to see if soft drink quality could be improved through the use of better data.

- Approval for adoption was given after long-term oversight by the OST & RSG
- Rollout in all McOpCo & new restaurants began in March 2022
- Currently installed in 292+ restaurants with 375 planned by end 2025

- Average Beverage Quality in Telemetry-monitored restaurants in 2024 was **95.25** (ie. drinks were served perfectly 95% of the time).
- We call this **Intelligent Quality** (IQ)
- IQ is live data and restaurant scores be viewed at any time

- The rise in the cost of Utilities has meant the ability to monitor unit power has perhaps become just as important as soft drink quality.

*All EPoS data supplied by McDonald's UK

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April 2025

Intelligent Quality.
Q1 2025 Score

Intelligent Quality is the % of a 24hr period when a drink is poured within the 5°C Global Agreement*

%

	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2025
All Restaurants	93.3	92.8	95.9	96.7	95.8	94.9	93.6	95.6
Company	92.7	91.2	96.1	96.2	93.8	92.2	92.8	95.8
Franchisee	94.9	95.8	97.8	97.3	98.0	98.0	95.1	95.4

■ **All Restaurants**   ■ **Company**   ■ **Franchisee**

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April 2025

*Based on average soft drink sales across a 24hr period.

Water Flow & Temperature Sensor Map.

April 2025

Portal.

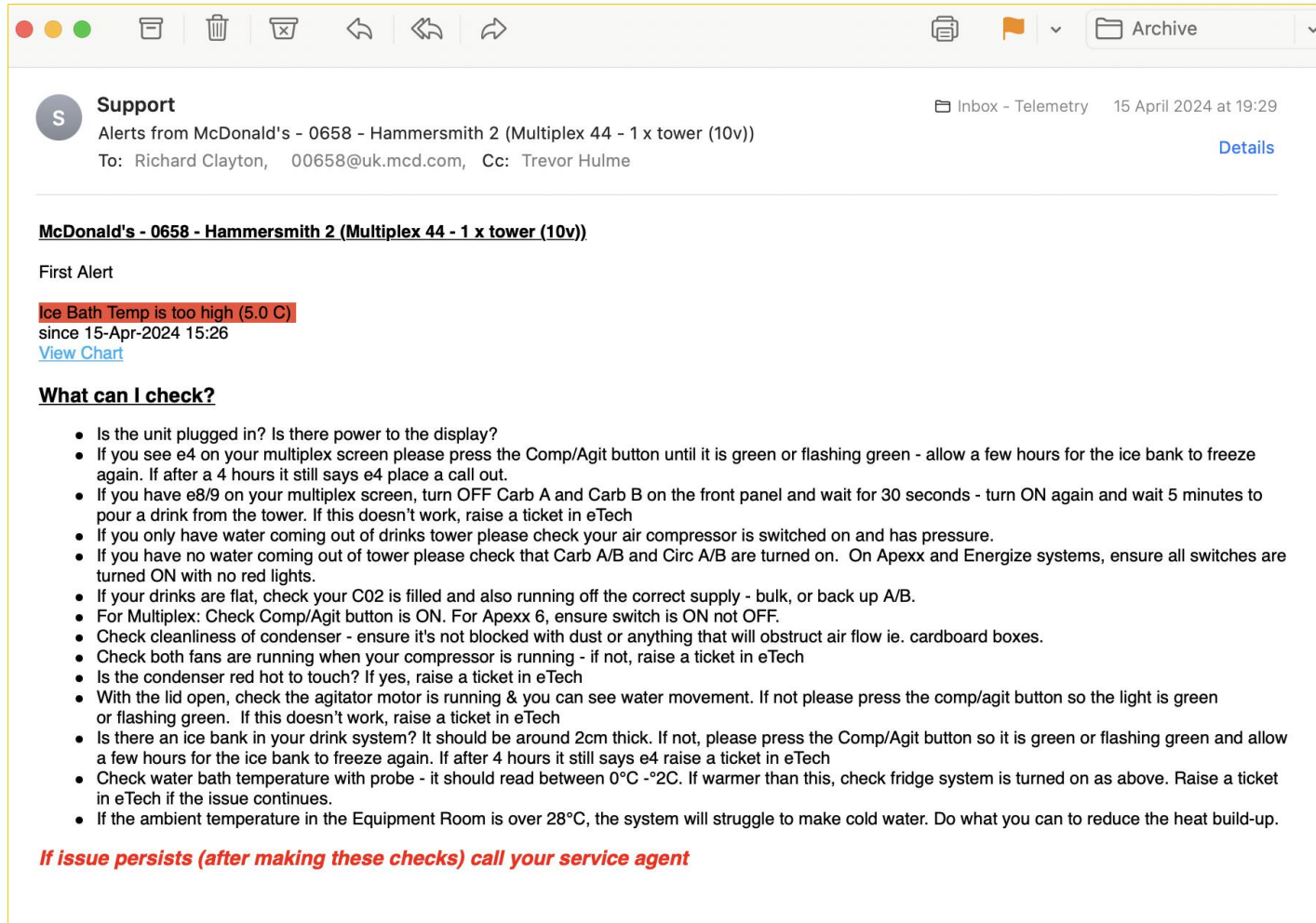Each restaurant gets its own page on our portal.

The performance of every sensor can be seen/monitored in graph format with adjustable timeframes & units (minutes/hours/days)

Alert parameters can be set/altered whenever necessary

The portal is integrated with eTech & logs all eTech tickets raised against soft drinks

Alerts.

Restaurants & Service Companies receive 4 major types of alert:

- Ice Bath temp
- Poured Drink temp
- Excessive Power use
- Excessive Water use

*Some also receive Chiller/Freezer/Boiler temperature alerts

Restaurants have to acknowledge each alert.

Fault Analysis.

Accurate fault analysis is key to sending the right engineers to the restaurant with the right part to avoid multiple visits
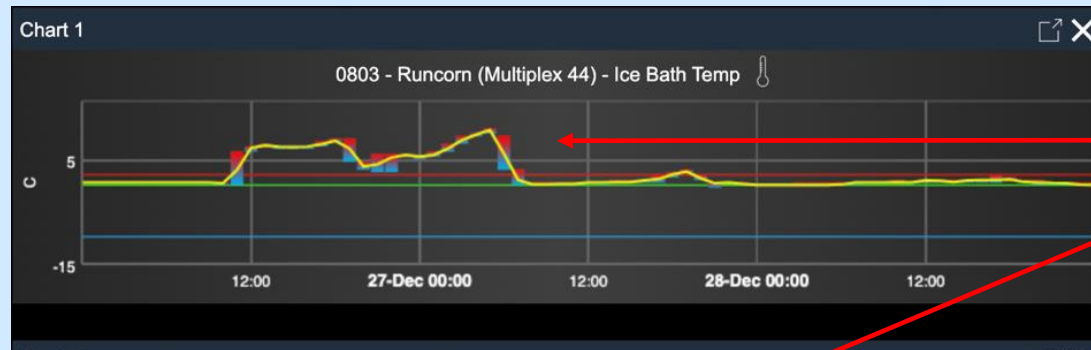
Ice bath temperature rise + power drop in Multiplex = possible accidental mistake **OR** refrigeration issue (thus needs a specialist refrigeration engineer)
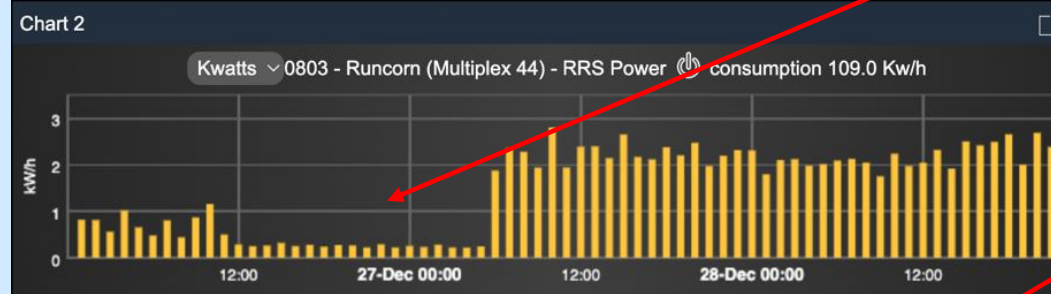
Ice bath OK but rise in flow temperature to drinks tower = recirculation or agitator motor fault (parts not normally carried by Service Companies)

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Service Company Integration.

CHECK PROCESS

Restaurant

Self Fix → **Issue Resolved No Visit**

eTech tkt raised

eTEch

Phone Fix

Service Company

ALERT

ALERT

Issue Resolved Service Co. Visit

CHECK PROCESS

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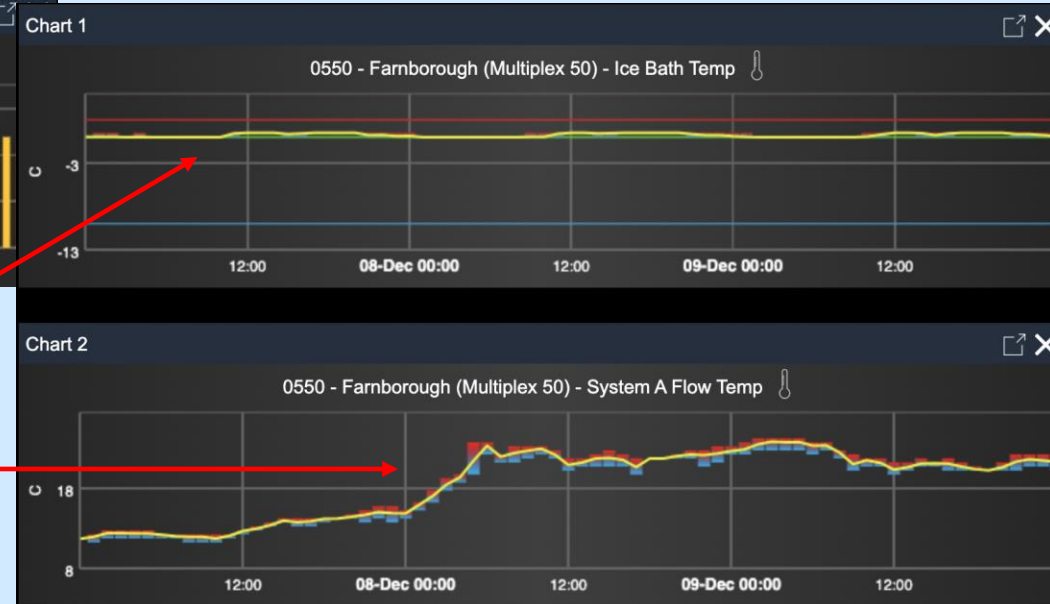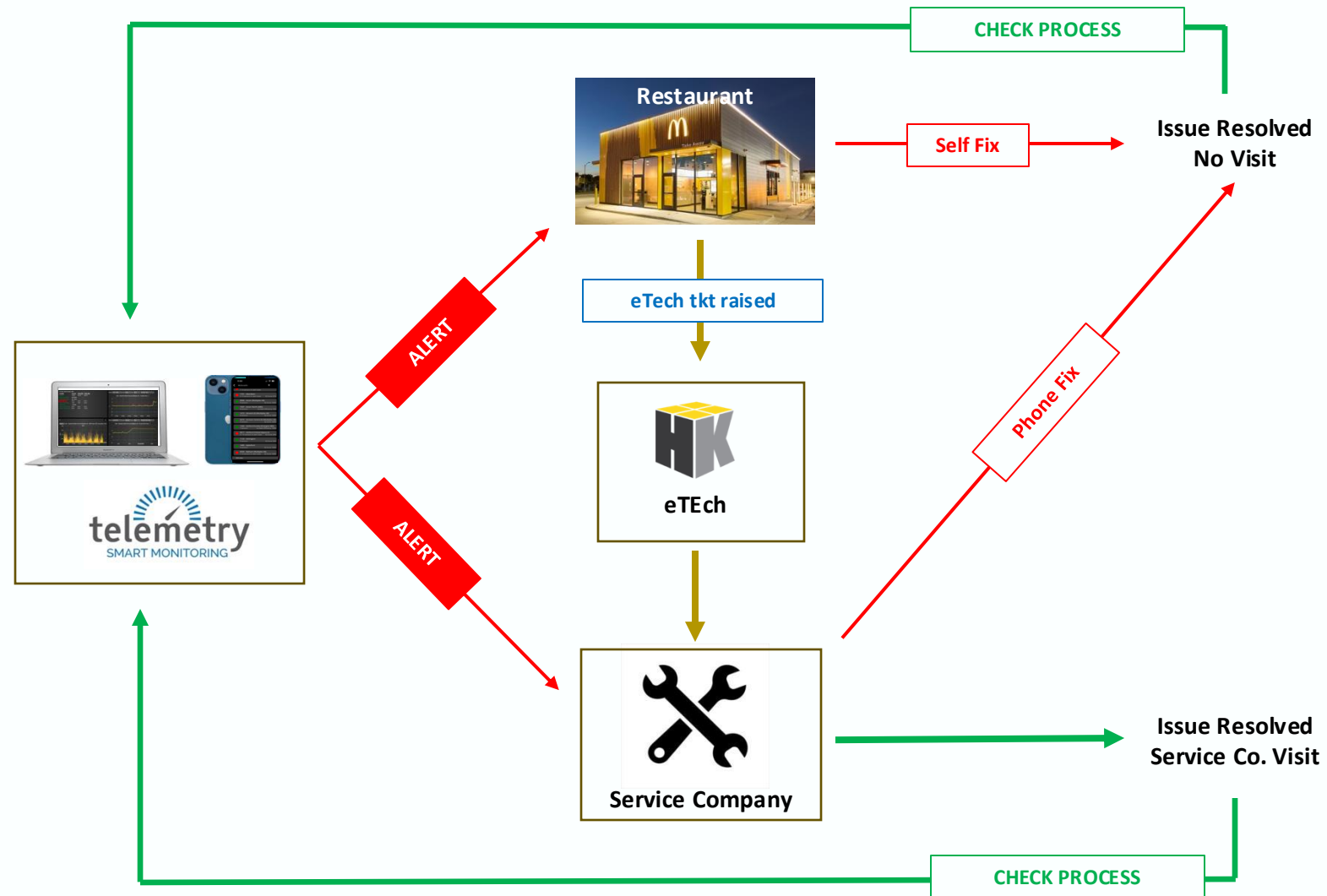
Service Company Integration/2.

Service Co. given direct access to the Telemetry portal & App

Before 0658 Hammersmith formally alerted, SC notice that the Ice Bath at the site had started to climb, combined with a power drop from the Multiplex

Immediate phone fix attempted. Multiplex restarted but site report grinding sound.
SC send out engineer to replace broken fan arm. Soft drinks back online with 1hr.

All the major Service Companies already have access, but <u>every</u> Service Company can have access.

Quality Maintenance Programme 2.0 & Telemetry

We sell almost **800million** carbonated soft drinks every year - they are the highest margin and most sold beverage in restaurants, but we also sell millions of 'warm' or out of specification drinks every year. The health of the soft drink system across restaurants is key to provide a 'Gold Standard' soft drink, which we know improves both brand perception with our customers, and in turn sales.

QMP visits take place twice a year, but QMP 2.0 with Telemetry introduces an 'always on' system, which enables you to monitor soft drinks quality and equipment performance 24 hours a day. **The Telemetry system sends alerts to the restaurant and your Service Company to take action that would otherwise go unnoticed. Often a phone fix is all that is needed.** As a result, Quality in restaurants with Telemetry is substantially higher (see graph).

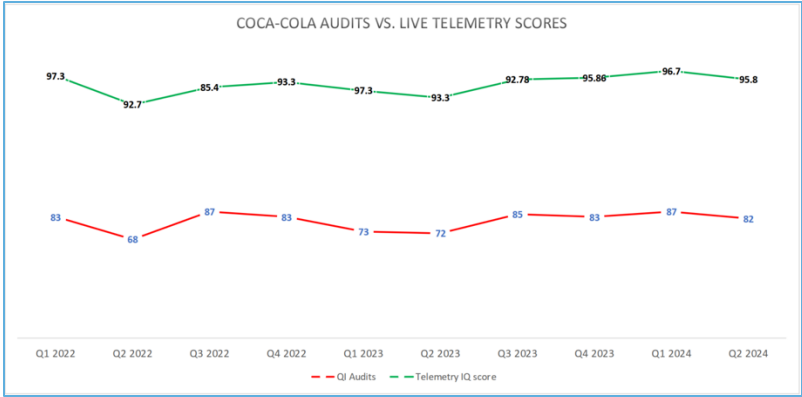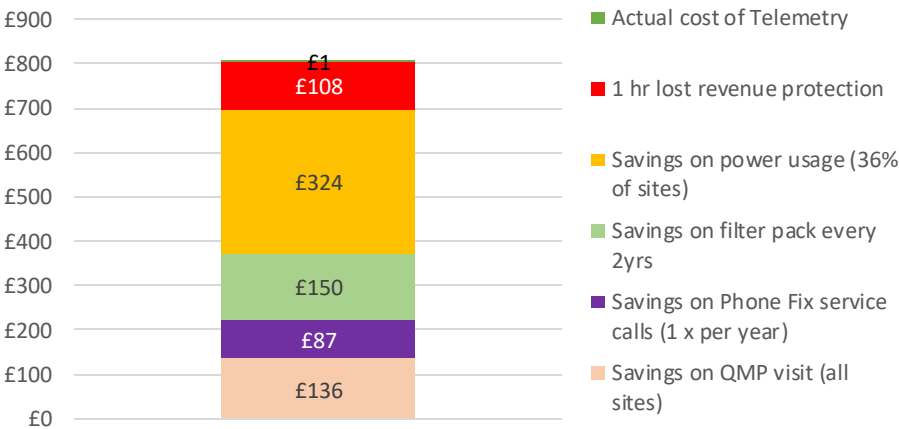COCA-COLA AUDITS VS. LIVE TELEMETRY SCORES

Investment

- The cost of purchasing the standard package of 8 sensors is **£1903 + VAT**.
- The sensors monitor water volumes & temperatures, temperature of the ice bath, ambient temperature in the equipment room, and power usage
- The ongoing monitoring costs **£67pcm,** with most of the cost being offset against savings listed below, making this system almost cost neutral

Main Benefits

Issue	Additional Comments	Saving
Reduced QMP Visits	As the system is monitored 24/7 it only requires one full QMP visit and one shorter visit at reduced cost	£136 Annually
Drinks being Unavailable	Daily cost of Soft Drinks being unavailable – average loss of Margin	£674 Daily*
Coke Cans	Additional cost of purchasing Coke Cans due to prolonged downtime of equipment	£385 Daily*
Water usage	The system can identify excessive water usage, which is often due to equipment issues or wrongly plumbed systems	£170 Monthly*
Power usage/efficiency	As drinks systems get older, they become less efficient and use more energy to run. Telemetry monitors energy usage and can show when older systems become less economic to run (currently 36% of FZ restaurants)	£972 Annually*
Filter pack changes	The life of a Filter Packs is measured by volume. Until telemetry was introduced, no volume measurement was ever possible. Most sites have filter packs that need changing every 2yrs, not every year	£300.90 every 2yrs*
Phone Fix	Service companies can review alerts and provide a phone fix instead of a reactive call	£87 per call*

Annual Cost of Telemetry

- Actual cost of Telemetry
- 1 hr lost revenue protection
- Savings on power usage (36% of sites)
- Savings on filter pack every 2yrs
- Savings on Phone Fix service calls (1 x per year)
- Savings on QMP visit (all sites)

Figures based on average volume restaurant and data from restaurants currently on Telemetry, and margin/sales data from BSi

GIRSM

Cost/Benefit

Average soft drink sales across UK restaurants in 2023 were approx.**1027*** per restaurant per day.

89.2% of these drinks are sold between 9am–9pm

That's **76** per hour (not adjusted for peaks within that time period)

Average size is 0.4L (Medium) @ £1.69

Assumed blended margin: 84.6% - £1.43

76 x £1.43 = £108.68 per hour

Lost revenue from soft drinks sales:
1hr = cost of Telemetry for **2mths**
3hrs = cost of Telemetry for **6mths**
9hrs = cost of Telemetry for **18mths**

*All EPoS data supplied by McDonald's UK

Case Study.

8am on 24ᵗʰ January:
Power used by Multiplex almost doubles as it starts to run constantly

4am on 25ᵗʰ January:
Telemetry alert sent to the site highlighting unusually high power usage (26.4 Kw/h on 24ᵗʰ, 38.6 Kw/h on 25ᵗʰ)

10am on 25ᵗʰ January:
Follow-up email sent to site with screenshot of issue, suggesting action

11.55am on 26ᵗʰ January:
eTech ticket finally raised because ice bath in Mx44 is completely frozen solid

12pm on 26ᵗʰ January:
Mx44 is turned off.

1.30pm on 30ᵗʰ January:
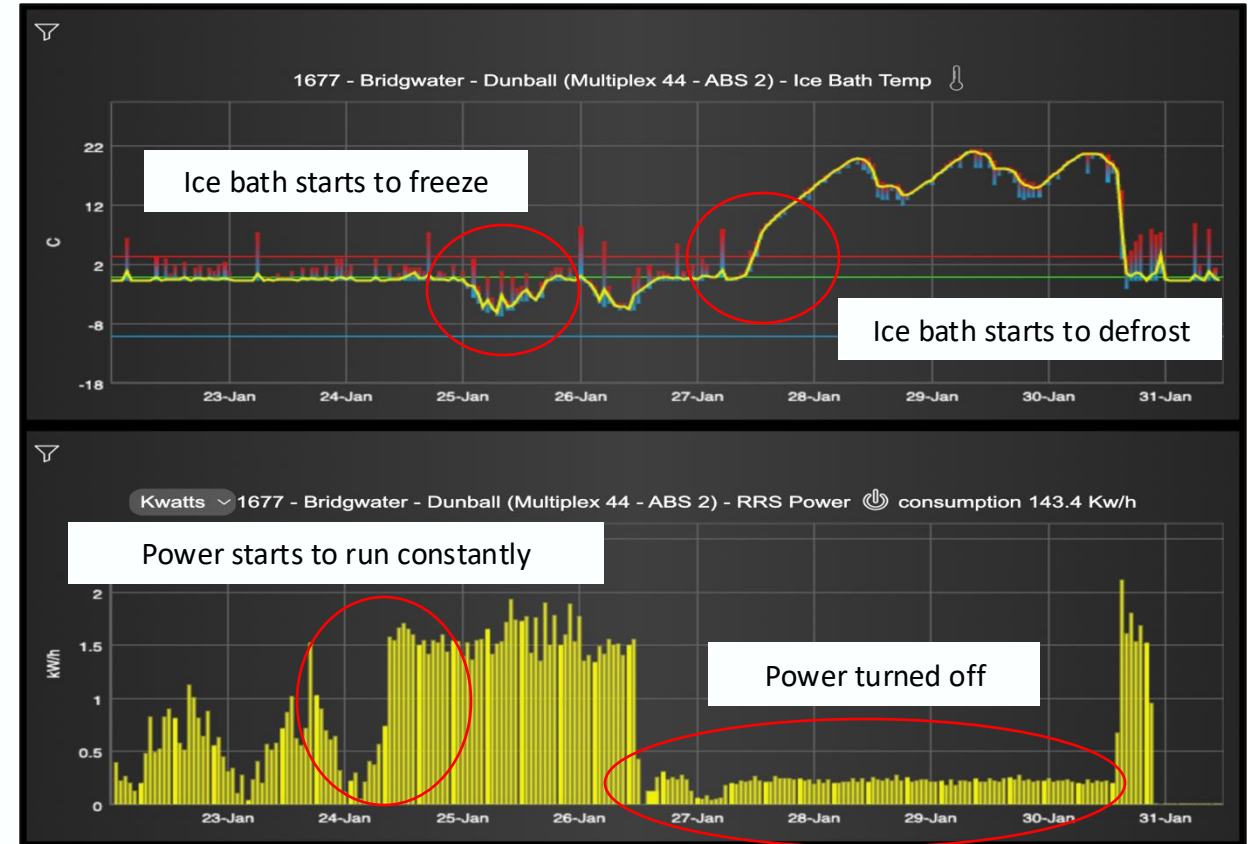Mx44 turned back on (too early)

9pm on 30ᵗʰ January:
Mx44 turned off again

7am on 31ˢᵗ January:
2ⁿᵈ eTech ticket raised – restaurant unable to sell soft drinks

3.30pm on 31ˢᵗ January:
Mx44 turned back on. Issue seemingly resolved

Multiplex 44 with ABS 2. Installed 30ᵗʰ Nov 2022 (Multiplex still under warranty at the time)
Q4 IQ score: 98.5
Q4 avg power use: 17.6 Kw/h

Power Savings.

In 2022 & based on power data, 9 x McOpCo restaurants with poor Quality scores were chosen to have their old & inefficient Apexx 6 machines replaced with a new Multiplex Icecore 44

Since replacement, the power savings in these restaurants has just hit **£100,000** (@ £0.275 per Kw/h)

This comfortably covers the cost of the new Multiplex & the Telemetry system

In all of these restaurants, the IQ Quality Scores have risen to well above the benchmark
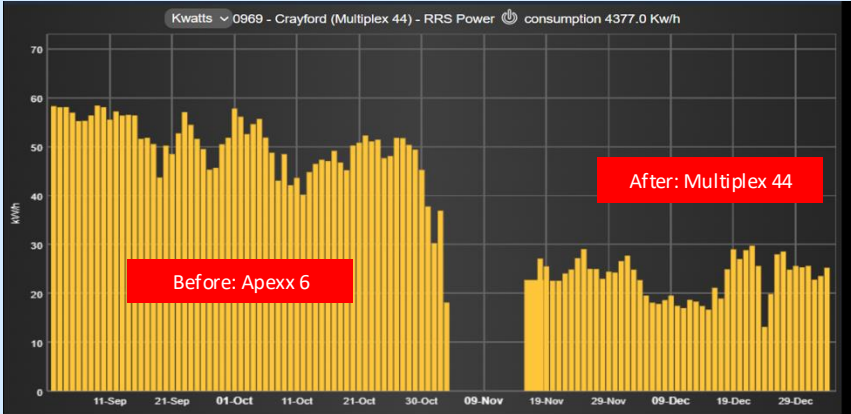
|	Power usage Kw/h		Cost		Diff +/-	IQ Q1/2 2022	IQ Last 12mths
	2021/2	Avg since	Previous	Actual			
0300 Dagneham FS	110	27.43	£27,527.50	£6,865.22	£20,662.28	81.70	72.3*
0370 Stonedale Lane	62	22.96	£17,067.05	£6,319.05	£10,748.00	79.31	95.7
0969 Crayford	59	28.5	£20,670.65	£9,984.52	£10,686.13	99.25	99.9
0970 Stairfoot	72	42.02	£25,225.20	£14,723.43	£10,501.77	100.00	99.2
0268 Leytonstone DT	54	29.04	£18,918.90	£10,173.27	£8,745.63	99.77	98.6
0441 Wigan	48	25.99	£16,816.80	£9,105.08	£7,711.72	88.99	98.9
0332 Swansea	58	28.94	£15,965.95	£7,967.64	£7,998.31	82.48	99.8
0336 Llanelli	62	36.73	£15,515.50	£9,190.89	£6,324.61	30.36	58.2*
0682 Oldbury	96	38.58	£26,426.40	£10,619.80	£15,806.60	90.73	99.9
					£99,185.05		
							*100 in Q1 2025

Filter Pack Replacements.

The current replacement schedule of the DP filter packs is currently based on restaurant revenue.

The useable life of the DP Filter pack is actually determined by volume of water NOT time or revenue.

This is important as High Ratio syrups should increase the amount of water being required while maintaining revenue levels.

The flow meters we install can accurately assess exactly how often they need replacing (this no longer needs to be once a year) & whether an upgrade is justified

Filter Pack: Cumulative Litres

DP 290: 408,000 litres

DP 190: 205,000 litres
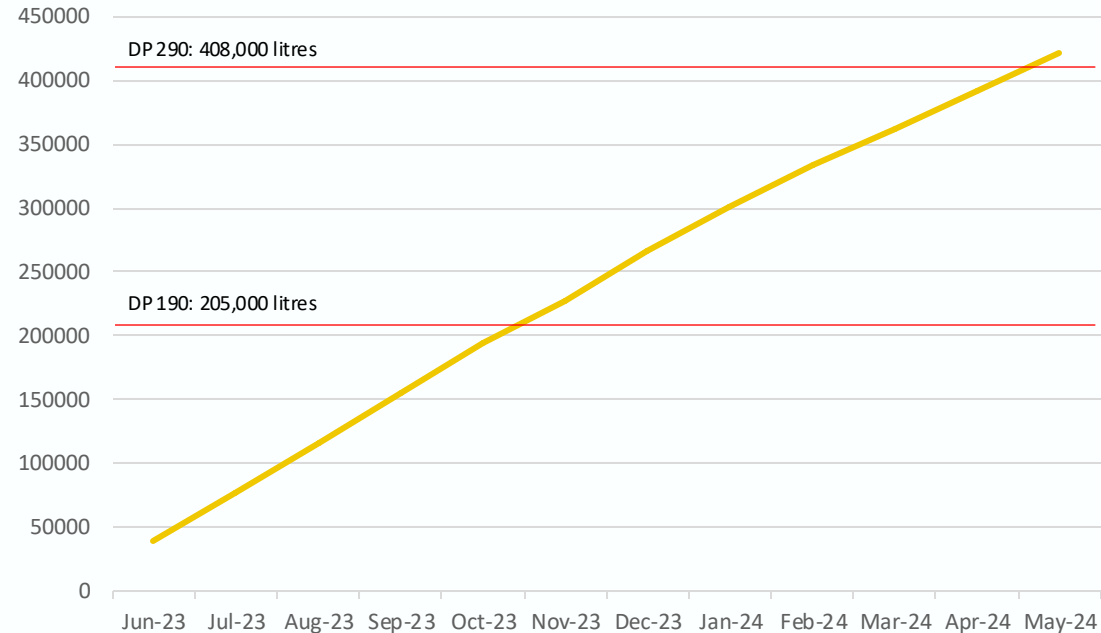
Example
This restaurant has a DP190 which can be replaced twice a year (£165 each) rather than upgrading to a DP290 (which requires installing a new head: £276.71 + labour) costing £300.90 per annual replacement.

Freezers, Chillers & Boilers.

We can also put temperature monitors into the walk-in Chiller & Freezer. Parameters are set to alert far more quickly (1-2hrs)

Raw data can be used for HACCP reporting
(we have an FSA Feasibility Study that supports this)

We've also been tasked by some Franchisees to supply a temperature sensor on the Boiler outflow pipe to ensure that water stays above 50°C as part of HSE regulations re. Legionella
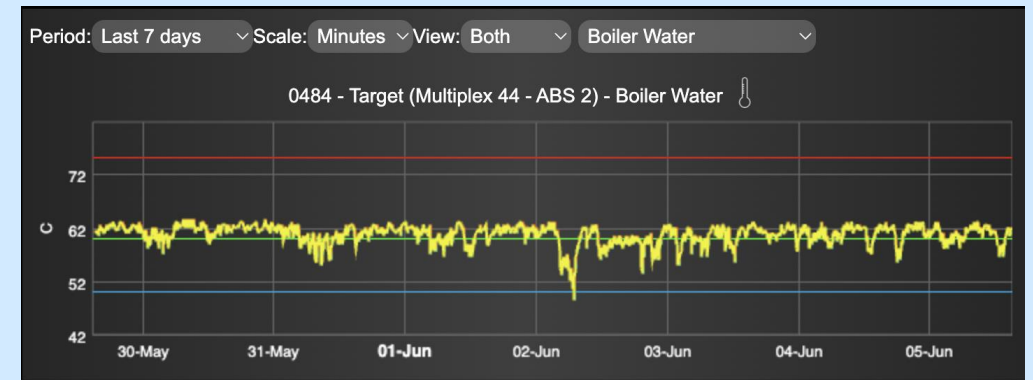
Cheaper QMP.

- The 2 annual engineer visits that have previously established the Quality Index (QI) score are part of the Quality Maintenance Programme (QMP) introduced by Coca-Cola in the UK in 2004
- The engineers go through a 400 point check across all parts of the soft drinks system
- The QMP programme is funded 50/50 by Coca-Cola.

- Telemetry facilitates a move to QMP 2.0 (in installed restaurants)
- Remote monitoring cannot completely replace engineer visits – various checks have to be done manually for Health & Safety reasons, or simply cannot be done remotely.
- As such, one full QMP visit is still required annually. This cost is shared 50/50 between Coca-Cola and McDonald's
- However, the introduction of remote monitoring allows the engineers to look at historical patterns of performance and the IQ score before they visit, so the 2nd visit can be much shorter.
- Coca-Cola have agreed to fully fund the 2nd visit.
- Immediately saves **£140** when adopting Telemetry

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For any additional insights, please contact us.

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April 2025