

ENVIROLOGIK

HVACR IOT MONITORING



JSA Service
Chiller & HVAC Specialists

PREVENTING HVACR EQUIPMENT
FAILURES WITH SMART IOT

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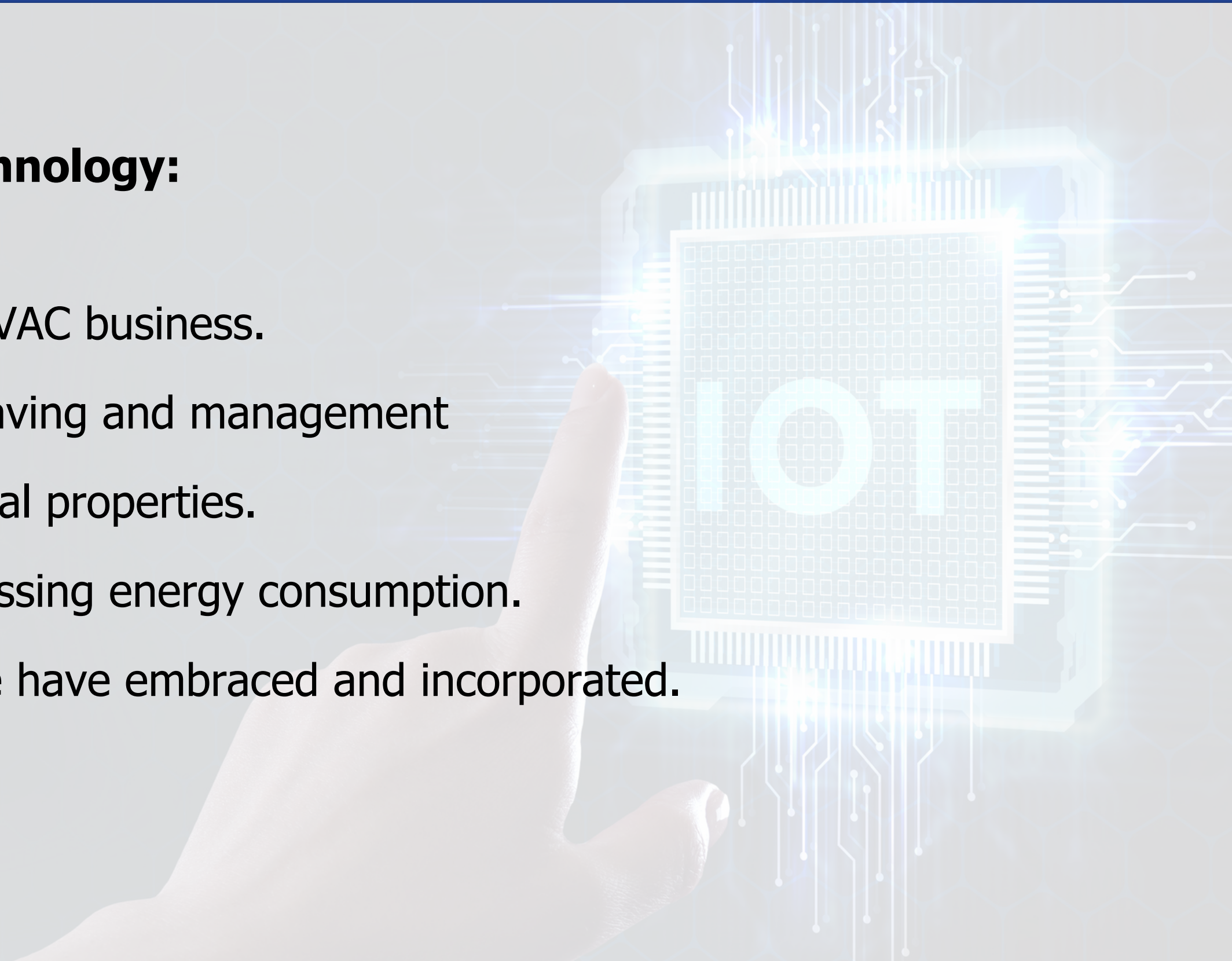


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ENVIROLOGIK BACKGROUND

Addressing the energy issues with technology:

- EnviroLogik are a SMART Technology HVAC business.
- It is an independent specialist energy saving and management business for HVAC systems in commercial properties.
- Customers want innovation when addressing energy consumption.
- SMART IOT Technology exists which we have embraced and incorporated.



SMART IOT and refrigeration:

- IOT is already being widely adopted.
- Few businesses have developed specific IOT technology for M&E, refrigeration and HVAC.
- Unique IOT refrigeration pressure monitoring and alarming system.
- Proven system with multiple installations.
- EnviroLogik have developed SMART IOT Technology for HVACR application and use.



SMART IOT and HVACR systems:

- Technology uses a secure mobile network phone system.
- System has been developed so that it penetrates basement and roof plant room walls using LoraWan technology.
- Unique IOT refrigeration pressure / energy monitoring and alarming system
- Additional monitoring of refrigerant flow sensors.
- Additional sensors can be quickly and easily installed on any piece of HVACR equipment.
- Battery and mains powered sensors available.
- Unique funding means hardware / software / monitoring can be paid from energy savings.
- Full reseller kits available to M&E and FM contractors.



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ENVIROLOGIK SAVINGS & PAYBACKS

Energy savings and paybacks:

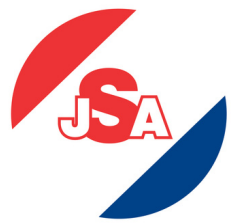
- Hardware and monitoring funded out of energy savings.
- Monitoring chiller, VRF and boiler energy consumption.
- Management of setpoints, start / stop times, temperatures.
- Optimising M&E use based on occupancy.
- IOT connectivity to any type of BMS.
- IAQ sensors determine energy use and savings.



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ENVIROLOGIK DASHBOARDS

- Different customer and contractor dashboards.
- Each can be customised to suit the site, application and different widgets can be added to suit.
- Available to view on any device and full alarming can be set-up depending on thresholds.
- Detailed data for a specific pieces of equipment.
- Live timelines, alarms of all parameters for detailed analysis of a specific asset.



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ENVIROLOGIK DASHBOARDS

- Royal Exchange Asset Types
- Asset Type
- Air Handling Unit
- Chilled Water Pump
- Cold Water Storage Tank
- Incoming Mains Water Supply
- Rooftop Chiller
- Room
- Sump Pit
- Sump Pump

AHU

Air Filter

AIR FILTER

41.90 Pa

Cold Water Storage

Cold Water Storage Temp

Water Level

611.00

200

DISTANCE

1000

Chiller 1 Energy Usage

Circuit 1 Energy Consumption

763.57 kWh

Circuit 2 Energy Consumption

654.82 kWh

Cooling

Flow Temp

CIRCUIT 1 LP

2.98 Bar

CIRCUIT 1 HP

2.98 Bar

Return Temp

CIRCUIT 2 LP

0.00 Bar

CIRCUIT 2 HP

2.57 Bar

Heating

Flow

05270

Return

06440

Hot Water

Flow Temp

05490

Return Temp

06000

- Images from a site survey in a well-known supermarket.
- Issues had been in existence for over 4 weeks and had not been notified or actioned.
 - Chiller low on gas
 - Water softener tank empty
 - Boiler fault and not working
 - Calorifier temp too low
- All would have been immediately notified to key staff by our IOT system.





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ENVIROLOGIK SENSORS

Multiple sensors to suit:

- Boiler / chiller water flow
- Cellar temperature sensor
- Refrigerant pressure sensor
- Hot water temperature
- Water temperature
- Humidity sensor
- Water leak detection sensor
- IAQ sensor
- Differential pressure sensor
- Power consumption sensor
- Full BMS integration



ENVIROLOGIK CLIENTS





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ENVIROLOGIK SUMMARY



- SMART IOT sensors can be installed on any item of HVACR equipment to monitor temperature, energy consumption, water leaks, refrigerant pressures / leaks etc.
- Extremely powerful system penetrates sub-basement plant rooms and has a long-range capacity.
- No need for capex expenditure. Can be paid for out of savings in energy.
- Uses a secure phone network and isn't vulnerable to external hacking.
- Reduces call-outs and engineers can diagnose issues remotely.



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