

## Topic

Cutting Costs through Preventative Maintenance and Remote Monitoring

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## How planned aftercare and remote monitoring can help businesses

In the face of rising energy costs, soaring carbon taxes, stricter environmental legislation and increasingly stringent regulation, businesses operating temperature controlled environments face some serious challenges. Planned aftercare and remote monitoring can help businesses simultaneously ace all of the above challenges with round the clock remote monitoring of industrial refrigeration systems.

Operating costs and reliability account for 80% of a system's total life cycle costs. Preventative maintenance aid by remote monitoring systems designed exclusively to identify issues with industrial cooling solutions are currently helping businesses slash costs and stay compliant throughout the UK.

## Round-the-Clock Monitoring

Remote monitoring systems actively collect data from the PLC of a refrigeration system and transmits it off-site via a broadband connection. Refrigeration specialists then analyse the data in-house and generate a task list for the engineers to do, therefore eliminating the need for costly on-site visits and traditional fixed schedule invasive maintenance.

Enhance remote monitoring systems are currently used across a number of sectors such as process cooling and food manufacturers to achieve optimum plant performance and lower running costs. In the cold storage industries for example, Tesco was one of the precursors to demand analytical data to improve plant reliability and safety and cut maintenance costs. The grocery market leader uses remote monitoring at all their UK distribution warehouses. Following the implementation of measures derived from full data analysis of their refrigeration plants, Tesco saved over £100K a year just at one site.

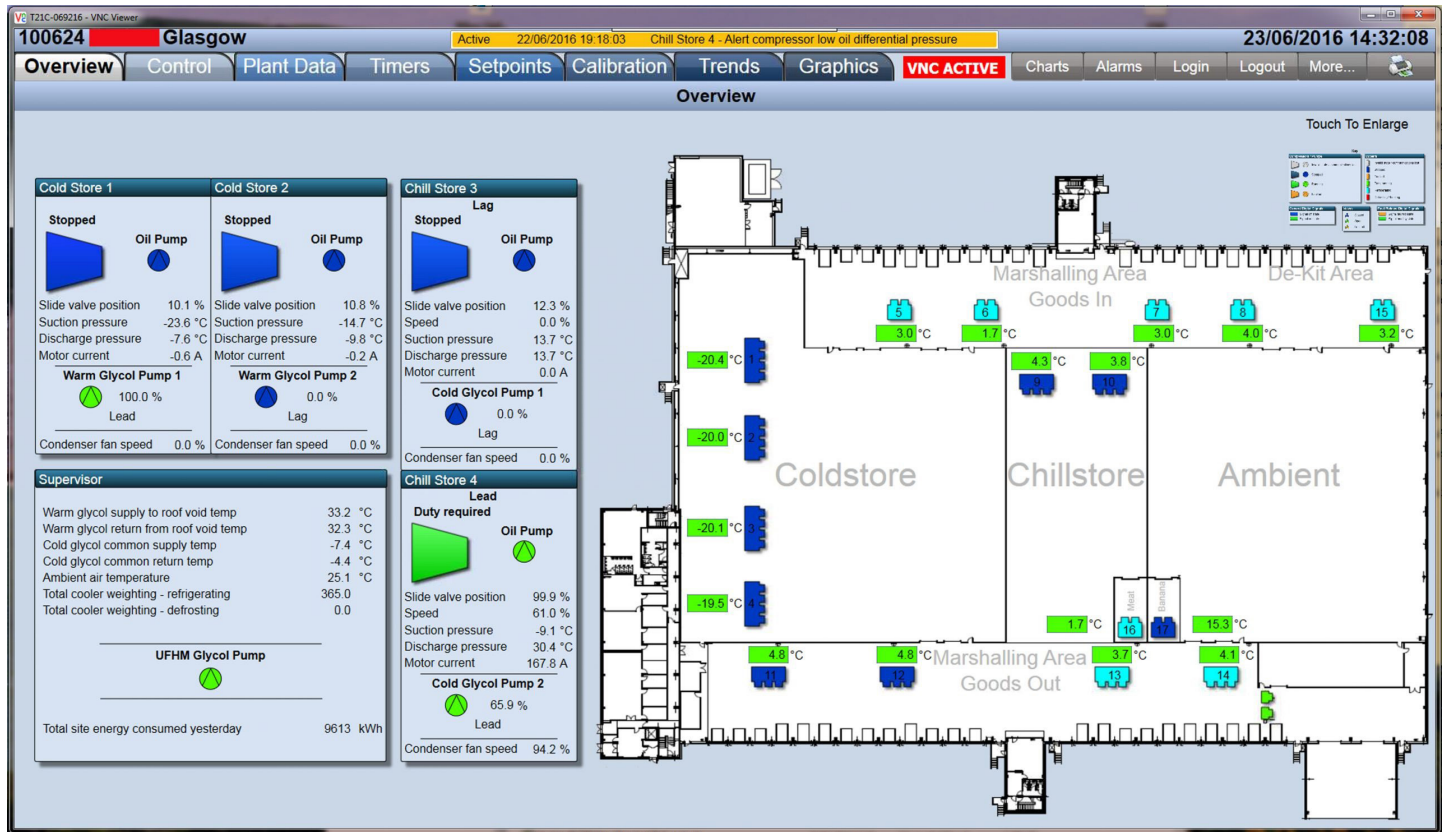


Star Refrigeration Maintenance and Remote Monitoring saved Tesco an average of £10K per month per site.

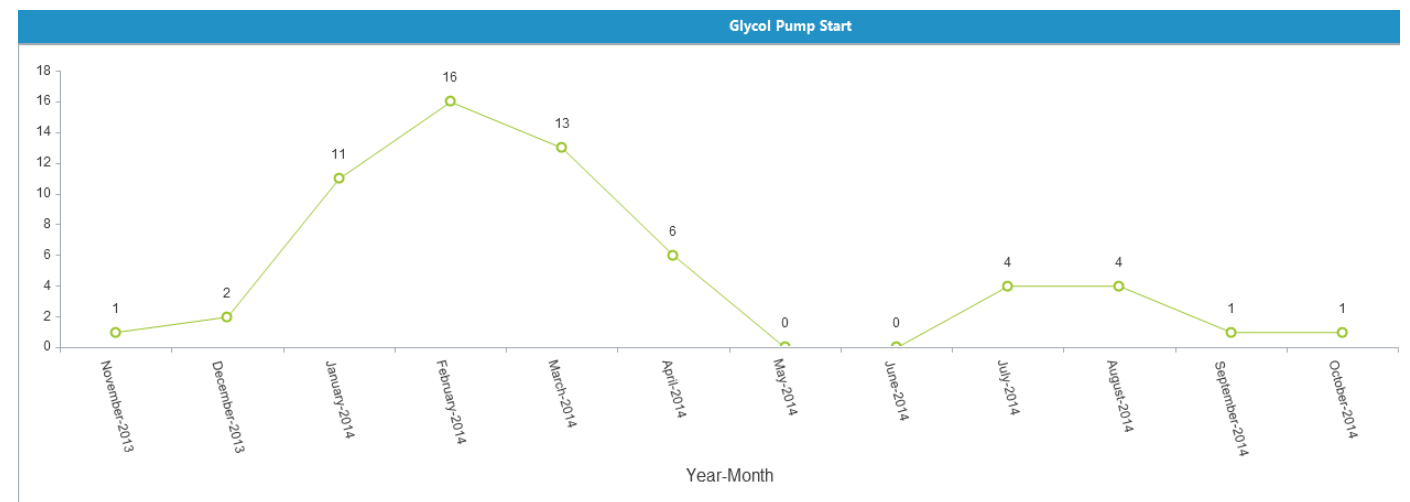
The Tesco case highlights a perfect example of how the company has taken a data-driven approach to understanding their refrigeration plant costs and have achieved remarkable success.

**Cost savings** from preventative maintenance and remote monitoring far outweigh **investment costs** at all of Star's customer sites.

areas that need investigation, issue alerts for emergency maintenance faults and measure the overall effectiveness of a maintenance programme. Part consumption, equipment operation, oil quality, refrigerant levels, water contamination and other refrigeration indicators are also analysed. Diagnostics solutions are used to consistently reduce refrigeration energy use, year after year.



Star Monitoring System showing an overview of the complete plant with information about all units. Status of the main units is displayed as colour coded blocks.



Glycol Pump Start

What is remote monitoring and diagnosis, and how does it work?

Today, they're primarily used to remove sources of energy waste, drive down running costs and lower energy consumption through better maintenance. Live on-site data is transmitted 24/7 into a Data Monitoring Hub. Here, it undergoes analysis, trending, graphing, and reporting. Data is used to highlight

Ultimately, data monitoring systems offer live fault reporting that allows the operation team to identify and visualize issues as they arise. A record of alerts and faults is usually kept for each site so that detailed reports of results can be presented to management in user-friendly analytical graphs and pie charts in order to demonstrate the effectiveness of the work carried out and to allow targeted maintenance to eliminate potential issues.

Data visualization is a powerful medium because it

provides a meaningful and comprehensible reference for management and plant operators to have fruitful discussions about how technical issues effectively affect the bottom line of the business.

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## Refrigeration Maintenance, Aftercare and Site Monitoring

As part of the 2013 Roadshow, Andy Smith, Branch Manager of Star Refrigeration Manchester, discusses the maintenance and aftercare of an Industrial Refrigeration plant, and reducing operating costs through site monitoring.

### Helping businesses harness savings

Industrial refrigeration is a major energy consumer and in some industry sectors it can make up to a huge chunk of the overall business energy costs. As an example, the Carbon Trust recently revealed that refrigeration accounts for 90% of energy costs in the Cold Storage sector, which further highlights the potential for savings. Business can harness the savings potential with comprehensive maintenance and remote monitoring services. This includes looking at ways to minimise running costs, as well as maintaining equipment to ensure longevity and performance. Not only do these solutions save cash, but they are also helping to put businesses on track for meeting Europe's 2020 target of reducing energy consumption by 20%.

If a plant is not maintained and effectively monitored then problems will naturally occur, resulting in the plant running inefficiently. Over time, these problems will increase the running costs.

For more on how preventative maintenance and remote monitoring can bring big savings for your business, see Star Manchester Branch Manager Andy Smith's [presentation](#) at the Star Refrigeration 2013 Roadshow.

For further information, contact [jward@star-ref.co.uk](mailto:jward@star-ref.co.uk)

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## The Star Refrigeration Group

