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## Case Study

### Grupo Vierci enhances fleet efficiency with AoFrio's impactful IoT technology

#### Introduction

AV S.A. – GRUPO VIERCI, the bottler of PEPSICO Beverages in Paraguay, sought to enhance the management and operational efficiency of its extensive fleet of commercial refrigeration units spread across the country. With a commitment to innovation and sustainability, Grupo Vierci partnered with AoFrio to evaluate the use of its IoT technology. Through this project, AoFrio aimed to demonstrate the transformative benefits of its IoT solutions, including AoFrio® Monitor and AoFrio® Smart Controllers (SCS), by connecting the client's refrigeration units.

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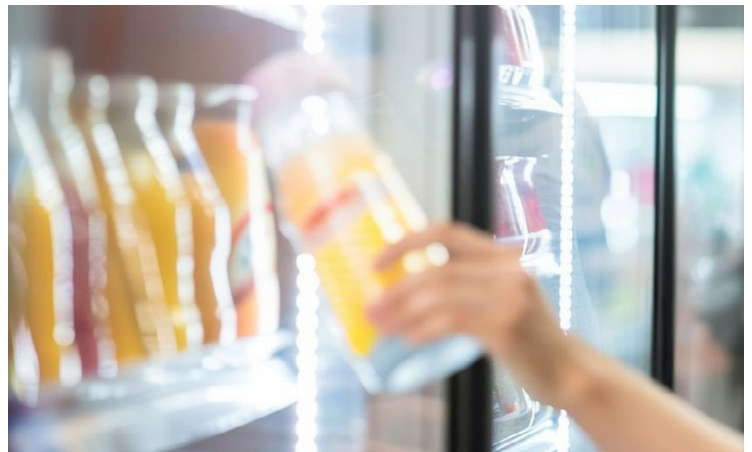
#### Executive summary

The project aimed to demonstrate the value of AoFrio's IoT Ecosystem in improving [Grupo Vierci's](#) refrigeration fleet management. By installing our IoT devices in a selected set of refrigeration units, Grupo Vierci gained enhanced visibility and control over their assets, predictive maintenance capabilities, and commercial insights. The results were positive, showing significant improvements in operational efficiency and asset management. This success has laid the foundation for Grupo Vierci to potentially explore [AoFrio's IoT Ecosystem](#) for its entire fleet, promising long-term benefits and a strong return on investment (ROI).

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#### Challenge

Grupo Vierci faced several challenges in managing its large fleet of assets. Firstly, they found it difficult to ensure operational efficiency for their refrigeration units. Asset control was challenging without frequent monitoring, leading to lost or misplaced units. Additionally, reactive maintenance practices increased downtime and repair costs, negatively impacting operational efficiency and customer satisfaction. Precise data always helps to make informed decisions, cut out inefficiencies, and gain revenue opportunities. Therefore, Grupo Vierci was looking to bring in operational efficiencies.



## Solution

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To address these challenges, Grupo Vierci implemented a program with AoFrio's IoT solutions. It began in mid-May 2023 with the installation of **Monitors** in refrigeration units that previously lacked connectivity. Over approximately 6-8 weeks, a specialized technical team, supported by AoFrio's Applications and Engineering departments, carried out the installations at the points of sale. By the end of 2023, Grupo Vierci decided to adopt **AoFrio's SCS Controllers** in their new display units. This decision extended the project until mid-2024, allowing Grupo Vierci to compare and evaluate both technologies.

Antonio Manuel Martínez, Commercial Transformation Manager at Grupo Vierci, commented,

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One of the most valued benefits that we observed while collaborating with AoFrio is that, through the information stored and provided by the hardware, it creates an entire ecosystem, allowing us to establish a logic and order to predict attributes that help us optimize the cooler fleet.

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**Antonio Manuel Martínez**  
Commercial Transformation Manager at Grupo Vierci

### Initial configuration

From the beginning of the project, AoFrio provided a series of both virtual and in-person training sessions aimed at technical staff and other roles within Grupo Vierci. These training sessions were designed to cover several critical aspects:

- **Monitor Installation Process:** Technicians received detailed instructions on how to install and configure the IoT devices in refrigeration units, ensuring a correct and efficient installation.
- **Introduction to AoFrio IoT Ecosystem:** The importance of IoT connectivity was explained to our client, along with how the technology enhances asset management, preventive maintenance, and commercial actions.
- **Training in Application Usage:** Specific training was provided on the use of the various applications developed by AoFrio, including both commercial (SCS Track App) and technical (SCS Field App) applications.

For AoFrio, these training sessions are an essential component to ensure the successful adoption of connectivity, making sure that all involved personnel are adequately prepared and trained to maximize the benefits of IoT technology.

This involved the installation of Monitors in existing refrigeration units and SCS Controllers in new units. The devices provided on asset location, equipment performance, and energy consumption, which were analyzed through the AoFrio® IQ™ platform.

The following pillars were considered during the trial for the client:

1. **Asset Management:** The Monitors enabled continuous tracking of each refrigeration unit's location and operational status. This allowed Grupo Vierci to detect misplaced units and optimize sales routes based on asset locations.
2. **Predictive Maintenance:** The IoT devices used advanced algorithms to monitor critical variables such as temperature, compressor usage, and door openings. This allowed Grupo Vierci to perform maintenance before equipment failures occurred, reducing downtime and repair costs.
3. **Commercial Insights:** The integration of IoT technology provided detailed data on the productivity of each unit, enabling the commercial team to make informed decisions about equipment deployment and store-level performance.

Federico Muller, Commercial and Customer Success Manager at AoFrio, says,

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One of the key points I have always emphasized while interacting with our customers is that to truly reap the benefits of connectivity, clients must define their processes and commit to executing the actions that arise from the insights provided by the indicators. Without this, dashboards and KPIs are merely for display, and the full potential of IoT devices will not be realized. With Grupo Vierci, I found a team fully committed to embracing connectivity because they believed that it was the path to gaining comprehensive control over their fleet. This commitment made it very easy for the AoFrio team to work with Grupo Vierci. During our weekly follow-up meetings, we consistently saw a team that was 100% dedicated to executing actions driven by the technology.

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**Federico Muller**  
Commercial and Customer Success Manager at AoFrio

During the project, the focus was on validating commercial hypotheses at the points of sale. Although no actions were sent to the sales representatives during this phase, it is expected that this will be done after the project is completed.

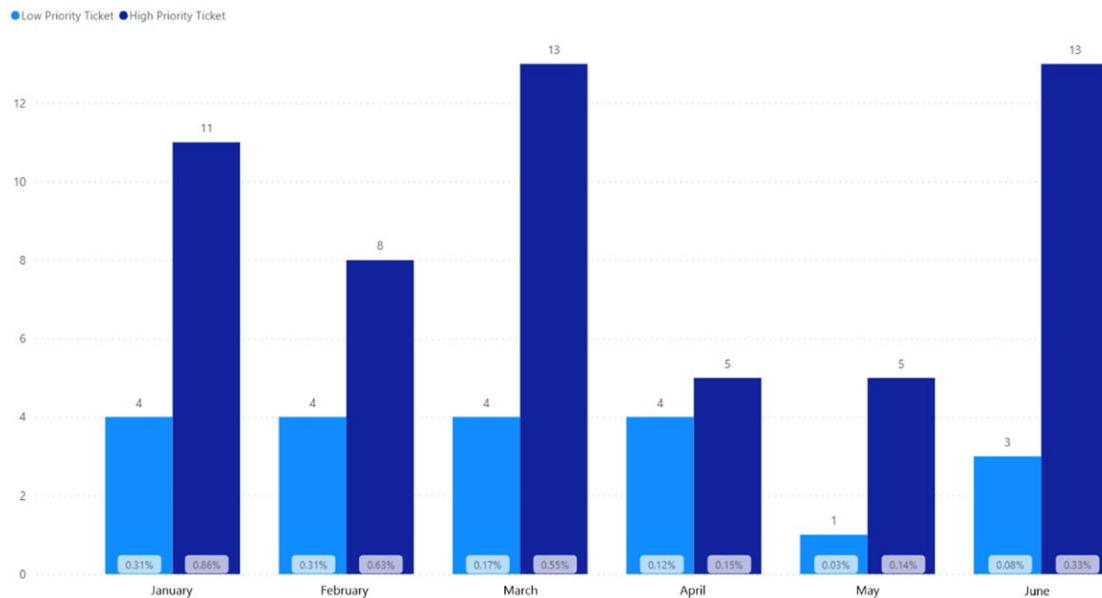
The hypotheses to be validated included the following:

- Productive Equipment
- Non-Productive Equipment
- Equipment Too Small for the Operation
- Invaded Equipment
- Turned Off Equipment

## Result

The project demonstrated significant improvements under all three pillars:

- Asset Management:** Continuous monitoring allowed for the detection of units with low readings, leading to actions that increased the percentage of visits. Grupo Vierci achieved over 90% monthly reading rates and 80% data download rates. Enhanced operational transparency allowed for better planning and resource optimization.
- Predictive Maintenance:** Early detection of severe and minor faults allowed for repairs to be made before the issues became critical. The AoFrio IQ platform provided data that enabled the efficient prioritization of technical interventions. At the start of each week, AoFrio sent a list of equipment to be inspected, detailing severe and minor faults. According to the feedback received, between 90% and 95% of the maintenance hypotheses were confirmed by technical personnel during their visits.



## Commercial Insights

Detailed insights into equipment productivity and store-level performance enabled more effective commercial strategies. Depending on the hypothesis, confirmation rates at the points of sale ranged between 90% and 95%. The platform offered a detailed analysis of the productivity of the units, identifying productive versus non-productive units and units that were turned off. This information allowed Grupo Vierci's commercial team to validate the accuracy of these findings in the field.

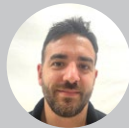
In the process of optimizing the fleet within the connected park, AoFrio identified a number of units that were not reaching the desired productivity levels. Productivity, in this case, is measured by the frequency of door openings of the units. To improve the overall performance of the fleet, we conducted a detailed analysis, comparing the current door openings of each unit with a previously established target (target opening). AoFrio proposed a strategic swap of units between different points of sale. Units that did not meet the target at their current location should be relocated to other points of sale where they did meet the target.

Highlighting the experience working with the client, Federico says,

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Over the past year, AoFrio has demonstrated benefits across various pillars of connectivity, and together with Grupo Vierci, we've been able to stay focused on addressing their specific needs. Along with the rest of the team, we believe that Grupo Vierci has all the tools necessary to elevate their fleet management to the next level, maximizing the return in each of the pillars we promote.

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**Federico Muller**  
Commercial and Customer Success Manager at AoFrio

The success of this project has been possible with the relentless efforts put in by our commercial team at AoFrio. Congratulations to Federico Müller, Customer Success Manager; Ezequiel Marino and Flavio De Oliveira, Application Engineers; and Nicolás De Elfa, Data and Application Specialist. No project would be successful without close collaboration with the client. Special mentions to Commercial Transformation Manager at Grupo Vierci, Antonio Manuel Martínez; Head of Trade Marketing, Anibal Omar Santacruz González; Cold Equipment Supervisor, María Genoveva Rivas Galeano; and Trade Marketing Supervisor, Paula Jojot.

About AoFrio, Antonio Martinez from Grupo Vierci says,

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A notable aspect of our experience working with AoFrio has been the support and professionalism of the team from AoFrio throughout the project.

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**Antonio Manuel Martínez**  
Commercial Transformation Manager at Grupo Vierci



## Conclusion

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The program successfully demonstrated the significant benefits of AoFrio's IoT technology in improving Grupo Vierci's asset management, predictive maintenance, and commercial operations. The technology enabled more efficient and transparent management of the refrigeration fleet, resulting in cost savings, improved operational efficiency, and enhanced tools for better commercial decision-making.

The high validation rates across all pillars of connectivity, coupled with the strong ROI and quick payback period, suggest that the full adoption of IoT technology across Grupo Vierci's fleet would be a prudent decision. Additionally, this highlighted the importance of continuous training and process optimization to fully realize the benefits of IoT connectivity.