

Cool Results from a Smooth Migration: Improving Performance of Ice Cream Production

Case Story

Ice cream manufacturer Froneri used Honeywell's migration tools and in-depth expertise to move to the latest control technology while making maximum use of its existing assets for an efficient, fast and smooth migration.

Background

The Turenki factory near Hämeenlinna in Southern Finland has been making ice cream since 1962. With 150 staff on site, it's the biggest factory in the country, and its products include the popular Pingvini ice cream brand.

Since October 2016, the Turenki site has been owned by Froneri, the second largest ice cream manufacturer in Europe and the third largest worldwide. It's made a number of improvements to the facility, notably improving environmental performance with the introduction of biogas in October 2017 as a heat source for pasteurization and for water used for process washing. It's also worked hard to reduce water use and waste.

Challenge

The existing control system at Turenki was over 30 years old and approaching obsolescence. Honeywell's TotalPlant® Alcont DCS is to be phased out from the end of 2018, while legacy Mitsubishi PLCs at the plant had no support.

Turenki had no expertise in-house or outside to call on to develop new logics, and had problems with spares and repairs. It also needed to address new challenges, such as cyber security, which it was unable to do adequately.

Overall, the legacy system presented a significant barrier to the plant's ability to improve operations and develop new recipe structures. However, any migration needed to be cost efficient and cause minimum disruption to production.

Solution

Froneri chose Honeywell's well established migration path from Total Plant Alcont to [Experion® PKS PMD](#) integrated automation system. It provides improved database maintenance, easier training, increased access to diagnostic information, single alarm and event logging, and faster control responses. Migrating with Honeywell means the intellectual property the customer has invested in at the controller configuration level is protected.

The solution replaced both the existing Total Plant Alcont DCS and legacy PLCs with Experion PKS PMD.

Any migration needed to be cost efficient and cause minimum disruption to production, while protecting the intellectual property invested at the controller configuration level.

Jarkko Hulkkonen, the Technical Department Manager at Turenki, said: "With the migration tools Honeywell was able to apply, we've realized the benefits of a complete system upgrade, without the associated costs and disruption it would usually bring."



Honeywell was able to make extensive use of existing infrastructure and components to accelerate implementation, reduce risks and control costs. A wide range of existing plant assets were reused, including Total Plant Alcont IO cards, IO racks and IO cabinets. Existing application solutions were converted cost effectively to Experion with Honeywell's migration tools and configurations retained. Operator displays were retained.

The project included Experion virtualization solution, HMI stations and a new 46" ultra HD monitor for the control.

The scope of work covered system network layers from L1 to L3.5, the firewall, hardware for the host and thin clients, and FCE controllers for Process IO control, Installed in existing cabinets. It also included IOC interface modules to replace XPR based controllers, and IO with Profinet support for replacement of the Mitsubishi PLCs. Cybersecurity was bolstered with an state of art Honeywell cybersecurity solution.

Honeywell was responsible for full project management and implementation of the system.

Support from Honeywell is ongoing, with an extensive service agreement. This covers 24/7 cover and free phone support, and preventive maintenance and service visits throughout the year, as well as safe, secure remote access. Honeywell's [Solution Enhancement Support Program](#) will prevent the new process control assets becoming obsolete over time – providing full support for Honeywell-installed assets and access to the latest software releases. By keeping the system at supported levels of technology the customer can rely on Honeywell spare parts and TAC support.

For More Information

Learn more about Honeywell's Migration Offerings visit www.honeywellprocess.com or contact your Honeywell Account Manager Distributor or System Integrator.

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Benefits

The upgrade was a complete success.

Honeywell's migration tools and services meant the new system was installed quickly and with little disruption to the process. The Total Plant Alcont system's 3000 IO points were migrated over three days and the new process areas' 1000 PLC IO points over a week.

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The approach resulted in considerably faster commissioning and start-up, lower training costs and savings in terms of spare parts as well as capital expenditures. A well-planned and executed migration to a modern control system improves plant availability and reliability. It can also provide a more flexible production platform. The requirements of the food industry are easy to implement and verify, utilizing Honeywell's high-tech solutions.

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About Honeywell's PMD Migration

Migrating to Experion PMD is an efficient solution to gain the latest functionality in a cost-efficient way. Customers are able to reuse many existing TotalPlant Alcont assets to minimize costs, commissioning and start-up times. Existing TotalPlant Alcont application solutions are converted to Experion using existing cabinets, I/O and wiring so the costs of implementation can be minimized while significantly extending the life of assets.

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