Four Ways to Control Distilling Operation Costs with Digitization

There is no better satisfaction for a distillery than creating consistently high-quality spirits for people to enjoy. But a lot of hard work, costly processes, and numerous resources are needed to produce these premium brands.

That's why today, distilleries around the world are finding new ways to control costs throughout the entire distilling process, whether it's efficiently managing the input and output of raw materials, monitoring utility usage, or even ensuring equipment efficiency. To do this, they are digitizing their production process.

Today, many distilleries, ranging in size from small to large, can closely monitor and effectively control operating costs by digitizing their visibility to every step in the manufacturing process.

Here are four key areas where distilleries are finding success in controlling their costs through digitization:

1. Visualizing and trending real-time distillery operations
2. Monitoring equipment efficiency throughout the distilling process
3. Automatically recording utility usage
4. Tracing grain intake to finished goods

Let's take a closer look at each of these areas.

Visualizing and Trending Real-time distillery Operations

Maximizing the output from grain ingredients and ensuring every recipe consistently meets quality KPI's is a critical task at a distillery. Do you have the capability to automatically track product from raw materials to finished goods? If not, a distillery may not reach total processing efficiency and achieve its quality parameters all the time.

With government regulations and the cost of raw ingredients, distilleries can't afford to miscalculate or lose track of the distillery production process. Unfortunately, tracking raw materials and alcohol produced at a distillery is costly and time-consuming as it is typically a manual process.

By digitizing operations, a distillery can track the flow of raw materials throughout the process, more efficiently and with less resource time. In particular, distilleries with MES technology significantly improve the tracking and traceability of entire processing operations. They gain complete transparency of the product as it moves through the entire plant and can reconcile the litres of alcohol to raw materials per production period.

Maximize Your Operation and Reduce Downtime

Nothing is worse than the feeling of losing valuable production time or not knowing if equipment is running as efficiently as possible. Or, worse yet, is knowing there is an equipment issue and not being able to identify it, find a solution, and prevent more costly downtime.

In a distillery, knowing the equipment's percentage rate of operation is essential to

> ❝ **At any time, a distillery can quickly pinpoint lost material or potentially rework processes to get more from raw ingredients to produce a consistently high-quality spirit.** ❞

maximizing production time. Unfortunately, some plants don't have a reliable method or even the capability of real-time monitoring of output target vs. actual production when it comes to equipment efficiency.

Imagine having full visualization of plant operations, including equipment speed and efficiency. To successfully monitor production costs and maintain control over the distilling process, some distilleries have implemented an Overall Equipment Effectiveness (OEE) solution. Obtaining this level of digitization in a distillery ensures equipment operates efficiently at each point of processing.

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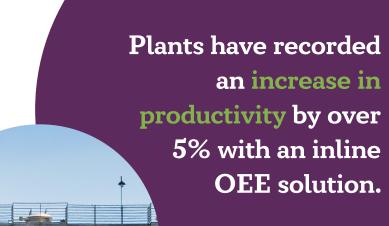
Conserve Resources Where You Can

Are you able to measure the steam, water, and electricity usage at any point during the distilling process? Can you pinpoint inconsistencies in your energy consumption on a daily, weekly, and monthly basis? How is your energy usage impacting your bottom line?

If you can't answer these questions – you may need to look closer. Distilling takes enormous resources, including water and steam for sanitizing equipment during CIP cycles, water for distilling, and electricity to run the equipment. With all these resources going into processing, a lack of data on utility consumption across the plant can make it extremely difficult to pinpoint and drive down the costly over-consumption of utilities.

Some distilleries are recording utility usage through strategically placed sensors and monitors to gain complete visibility of energy consumption. The information collected is aggregated into a MES that serves as a centralized data hub. Digitizing this information with a MES allows a systemic recording of utility usage and you can align and track your energy consumption by production period. Once you have this capability, a distillery has the distinct advantage of precisely measuring energy usage at any area of the plant's operation.

From there, a distillery can:

- Troubleshoot issues
- Reduce consumption
- Define plant initiatives
- Drive efficiency and savings in line with sustainability targets

> **Plants have recorded an increase in productivity by over 5% with an inline OEE solution.**

Get the Highest Yield Possible

Digitizing a distillery is a big commitment, so some plants are gradually working on automating equipment and processes to phase in digitization. For some distilleries, the final step is phasing out paper documentation. When it comes to documenting the process, paper-based batch records are the traditional method and can be difficult to transition out of the distilling process.

Unfortunately, paper-based batch records are also slow, inconsistent, and unreliable; this is why once distilleries take that final step to digitizing batch records, they reduce the amount of time operators spend on recording data.

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Ultimately, it frees up the operators to take more proactive decisions to improve the process.

Distilleries that digitize with a MES solution will have more timely and actionable data to monitor their entire plant. Finally, all their key people have access to the centralized data required to monitor the consistency and efficiency of each batch produced. A distillery can optimize data management and ensure the operator's focus is on producing the highest quality and consistent spirit.

Control Distilling Costs with MES

The increasing costs of distilling shouldn't overshadow a distillery's primary goal of producing premium, high-quality spirits.

Learn About Orbis MES

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If managing the growing distilling costs impacts your distillery's efficiency and productivity, Orbis MES is an automated solution that significantly improves visualization of all the data in your distilling operations, monitors systems, and ensures strong yields.