

Enhance Food Plant Productivity and Traceability with Symphony

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How to transition a food processing facility from an outdated Plant Floor Data Collection and Warehouse Management System to a proven Plant Productivity and Traceability Suite.

Although traceability has been part of the food industry for a long time, it has become a cornerstone over the last several years. With all this buzz, many plants have either tried to implement a new traceability system or replace an outdated one. Many questions swirl around implementing or improving traceability. What exactly is traceability? How can I achieve better traceability? What sort of ROI will I get if I update my plant's traceability? All these questions are valid, and an in-depth look into traceability will answer most questions.

Simply put, traceability is the by-product of a proper plant-floor data-collection system (MES) and a detailed inventory management system (WMS). When product is properly tracked from the time it enters a plant (receiving) until the time it leaves the plant (shipping), traceability is achieved. A plant will have complete insight

into where the product came from, what product manipulations were made (work in progress/WIP), and where that product was sent. Recalls or mock recalls become a couple of button clicks instead of weeks of digging through old records.

An automated plant productivity system enhances plant performance through automation and integration. By implementing a plant productivity and traceability system, like Carlisle's Symphony, companies can improve their production capacity and traceability mandate. In addition, food processing companies can grow their market by gaining access to larger food retailers and distributors who have stricter recall requirements. Systems like Symphony will help plants gain access to a lot of production and inventory data. That data helps plants gain insight into trending sales, available inventory levels, production costs, and overall production throughput.

All of this sounds good, but what happens when a plant has a traceability system that has been running for years and is now outdated? The hardware is breaking, the operating systems are no longer supported, and the data being collected isn't relevant. Trying to replace an older automated plant traceability system can, many times, be worse than implementing a new system into a plant that doesn't have any system at all! This paper was created as a guide to help navigate the pitfalls of ripping out that old system and replacing it with a new system like Carlisle's Plant Productivity and Traceability Suite.



Problems with Outdated Plant Traceability Systems

Why should a plant go through the hassle of replacing their existing traceability systems? Far too often plant traceability systems become like old cars; their owners want to get the most out of their investment, so they drive those systems until they fall apart. While it's never a bad thing to get the most out of an investment, too many plants limp along without realizing that investing in a new system can end up saving them money in the long run. Outdated plant traceability systems can present a lot of business risks as well as headaches. Here are a couple of common business risks that outdated plant traceability systems can present:



Business risk due to software OS being end of life – Depending on the age of the existing plant traceability system, the software operating system might be very old. Carlisle Technology is constantly trying to pry some of their older DOS based systems away from customers who have been using them for 20+ years. Outdated and unsupported operating systems create a serious business risk for obvious reasons like security, IT support, efficiency, database storage, and lack of support. Having an outdated operating system will restrict components of a plant's traceability system due to compatibility limitations.

Loss of production due to outdated and end-of-life hardware – Plant floor hardware is the life-blood to any data-collection system. Hardware can take serious abuse on a production floor. Equipment is regularly subjected to high pressure water, organic matter, corrosive cleaning materials, and physical abuse. In such harsh environments hardware will break down regularly. Old outdated hardware can become a liability to a production environment. Like any technology, components become unrepairable as they age. Day-to-day plant operations depend on properly functioning hardware. When a piece of hardware dies it can shutdown a production line for an extended period.

Risking operations by relying on unsupported software – No two food production plants operate the same. That means that most plant software systems have been customized and tailored to fit each plant's needs. This can make software support on older versions of custom software a nightmare or impossible. When a plant is running their entire business on old, unsupported, custom software they are asking for trouble.

No path moving forward to bring existing plant traceability system up-to-date – When a plant traceability system moves from the original core software product into a customized and tailored software solution it often isolates that solution and it becomes very difficult to update it to current versions. Development methods have improved in this area, but a lot of the old outdated systems used outdated development methods. Therefore, updating an older traceability system becomes an entirely new implementation project because the outdated software needs to be fully replaced.

Energize the Plant with a New Productivity and Traceability System

With all the problems that can be caused by an outdated traceability system it's easy to see the need to replace the outdated system. However, it's difficult to get a plant to commit to replacing their old system. Replacing an old system can do a lot to energize a plant's environment. A complete system will touch most areas of the plant from the production floor to the sales office. Therefore, the impact of a new system is widespread and it's benefits are felt throughout the organization.



Remove the work arounds and headaches – Plant employees, both in the office and on the production floor, typically need to develop work-around solutions to cope with the short comings of the old plant traceability system. Replacing that old traceability system with something that is more configurable and user friendly will eliminate undue stress on employee efficiency and it should remove most, if not all, of those old work arounds.

Tap into new technology – Technology is changing quickly. Chances are technology has come a long way since the old plant traceability system was implemented. Modernizations in data collection devices, hardware communication (i.e. Bluetooth, Wi-Fi, etc.), user accessibility, dashboards and analytics all have the potential to maximize the ROI on a plant traceability system.

Cultivate new opportunities and business – In order to expand into a market place with larger customers, food plants must demonstrate the effectiveness of their traceability system through mock recalls and other traceability audits. A modern traceability and plant productivity system like Carlisle's Symphony will make navigating through those audits simple. Accurate and easy to read reports allow plants to easily plan production and view their trending and popular products.

Overcoming the Potential Pitfalls of Swapping Systems

Once a plant decides that it is time to replace their existing traceability system the real work begins. Excitement is always buzzing as the outdated system is put on the chopping block and a new system is selected to replace it. Office and administration personnel are excited to get rid of the software that has slowed them down and caused innumerable headaches for them over the years. The plant maintenance and IT teams are excited to get rid of outdated, buggy, broken hardware, and plant executives are chomping at the bit to get their hands on all the new production and inventory data that will be available to them.

However, inevitably that honeymoon stage will sour and the reality of ripping out and replacing an entire plant traceability system will begin to take effect. No matter who the new system provider is or how experienced and mature their software applications are, there will always be bumps and hiccups along the implementation road. Expect those bumps and plan accordingly! By proactively anticipating the common pitfalls of the upcoming implementation, many of those pitfalls can be avoided; the risk of the implementation team becoming stressed and overreactive will be drastically reduced. Some of the most common pitfalls are:

Resistance to process change – For years the production plant has operated with the exact same processes in place. Those processes have become ingrained in the plant culture, and human nature is to resist change. No matter the size of the operation those ingrained processes have become a key piece to the plant's DNA. With the new system a decision will need to be made regarding existing processes. Which processes are worth preserving? Which processes have been developed due to inefficiencies in the old system? Is the plant ready to change some of their processes? Much of the pain associated with process change can be avoided by having a plant environment that is adaptable and able to change if necessary. With both an adaptable plant environment and a software solution that is configurable and able to accommodate slight modifications, the process change pitfall will be a non-issue.

Employee buy-in and training – An in-house project champion is key to any successful implementation. As mentioned above, human nature is to resist change; a project champion will help rally employee buy-in. They will increase employee morale and be able to empathize with the stress that the plant employees are going through. Employees will have a hard time buying into using a new system if they don't have a specific champion they are familiar with who can walk them through the transition.

Using the vendor's implementation team to train all the plant employee's will be an impossible and expensive task. Alternatively, having the software provider train the champion and then utilizing the champion to train the staff is called "training the trainer." Using the "training the trainer" method enables the champion to train their staff at

their own pace and allows them to regularly reinforce the new processes that are being developed. That properly trained and engaged champion will alleviate the stress that can be felt by employees who don't understand the system they have been given to use.

Reuse of existing hardware – When budgets are tight and solution costs are high decision makers look at reusing existing plant hardware to reduce overall solution costs. This isn't always a bad idea when it is done properly, but too often this can create more problems than it solves. First, make sure your existing hardware is compatible with the new system. For example, often plants want to reuse their shipping scanners since they are expensive. There are countless manufacturer's model numbers when it comes to shipping scanners. These model numbers refer to the operating system, keypad functionality, scanning range, operating temperature range, and processing power. If those specs don't line up with the requirements of the new plant traceability system, an effort to save cost will turn into a major problem.

Another consideration is to make sure you are not trying to reuse end-of-life hardware. Is the hardware serviceable for the distant future? If not, then use this system swap as an opportunity to eliminate business risk by replacing unserviceable hardware. Government grants are readily available to help food production facilities replace outdated plant traceability systems. Including the hardware scope of the project in the grant proposal can be a great way to get funds to help replace that old dying hardware.

Timeline Issues – Any solution sales rep that has presented a plant system to a prospect will know that one of the first questions asked (after "How much will this cost?") is "how quickly can you implement this solution?" Timeline issues can become an unnecessary burden on any project if those timelines are not realistic. Plant traceability systems are extremely complex and effect almost every area of a production facility. From the scales on the production floor to the invoice printed in the office, these systems cover a large territory. If the implementation of a system is rushed or not thoroughly vetted before it is implemented, the production facility will find themselves in an endless loop of work-arounds and frustration.

The successful implementation of a plant traceability system will rely heavily on the amount of time and effort that the plant's project champion or internal project team can dedicate. They will be working together with the vendor to create product files, design/redesign label formats, vet process flows, and test the solution before the system goes live.

Make sure the timeline for the implementation isn't rushed, isn't during the plant's busy season, and isn't during a season where most of the staff is on vacation. Set realistic timelines and goals that encourage a successful "go-live."



Keys to a Successful Implementation

A lot can factor into a successful implementation such as company culture, employee turnover, project complexity, and project management to name a few. Most projects start with optimism, but that optimism can fade fast when the reality of a complete system swap kicks in. A Carlisle customer once said, "a full traceability and warehouse management system swap is not for the faint of heart!" In Carlisle Technology's 30+ years of experience a few keys to success have become clear.

Form a Partnership – Move past the vendor/customer relationship and create a partnership with the solution provider. The implementation will be a large undertaking for both sides. Having a partnership will create effective lines of communication between both sides. Adopting a new plant traceability system is effectively committing to that vendor for the long-term. Once the project is completed the plant will rely on that company for software and hardware support, software updates and maintenance, and additional projects or product enhancements. Creating a partnership will ensure not only a successful implementation but a successful relationship moving forward.

Architect the Right Solution – It's important to remember that no two processing facilities operate the same way. Therefore, every solution implementation is as unique as the facility and processing operation itself. Having a solution expert assess the current process flow, plant layout, and general business structure of the plant will provide

valuable information required to make sure the solution is properly tailored to fit the plant's needs. Don't believe the "out-of-the-box solution" myth regarding traceability. No matter which plant productivity and traceability solution is selected it will need to be configured, modified, and enhanced to fit the unique requirements of each processing plant.

Reduce Complexity – Keep it simple, that's the mandate! All too often plants bite off more than they can chew and find themselves with a project scope that is insurmountable. Adding complexity to the scope of a project from the very beginning will drastically reduce the probability of a successful implementation. Complexity in a project adds to the budget, it adds to the overall project timeline, it increases employee training requirements, and it can also reduce employee morale. Carlisle Technology's Symphony System was built with a modular approach. This allows customers reduce the initial impact they are introducing to their plant environment. Once the base modules have been installed and have been in operation customers can add additional software modules to expand their system.

Create Project Goals – Have clear project goals from the very beginning. Understand the pain points of the plant and make sure the new plant traceability system is a solution to those pain points. As the project is underway make sure there are clear project deliverables and dates. This will help ensure the project stays on track and that there are no surprises as the project gets into the final stages.

Proactively Avoid Pitfalls – Understand the pitfalls listed above and keep an active look out for other pitfalls as well. One major project killer is a reactionary mentality. Don't kid yourself - pitfalls and issues always pop up in projects of this magnitude, so be proactive in searching them out and addressing them!

Time to Replace the Old System!

Now it's time to replace the old outdated can successfully get rid of their outdated system and enjoy being on a current, fully supported modern Plant Productivity and Traceability platform. Carlisle Technology has specialized in replacing old outdated systems for over 30 years. Their plant experience allows them to be an industry leader when it comes to data-collection, weighing / labeling, reporting, and traceability. Their project and implementation teams specialize in providing consultative help throughout the entire installation of a new Symphony system. Carlisle understands a plant's pain points and has developed their software and hardware to be a complete and fully integrated plant solution. To read a case study on this topic [CLICK HERE](#)



Carlisle's Plant Productivity and Traceability System: SYMPHONY

Symphony is Carlisle Technology's plant productivity and traceability software suite. With a modular design, Symphony was built to expand as a customer's needs grow. Control plant floor production by managing product files, label formats, and product tare weights. Collect Data from the plant floor and get insight into production, productivity, and traceability. Streamline shipping, receiving and order picking with Symphony's Warehouse Management System. Symphony combines rugged plant-floor data collection (MES) with fast and reliable warehouse management software to give users a 360-degree view of their entire operation. Key features of Symphony include:

- Complete traceability from supplier to customer
- End-to-end WIP tracking including recipe-based production
- Detailed inventory management (FIFO, holds, locations and warehouses)
- Centralized product and label management
- Sales orders, purchase orders, product costing, and invoicing
- Pricelist management
- Automatically collect data from scales, scanners and mobile devices
- Reports: sales, inventory, production margins, and yields
- Integration with ERP and Accounting systems

Carlisle Technology: Our Expertise

Over the years, Carlisle Technology has steadily responded to the needs of the food industry by adding product features, application configurability, scalability, and ERP System integration. Today, Carlisle's focus is on full featured, plant wide, integrated software and hardware solutions that meet the needs of the Food Processing Industry from receiving to shipping and order fulfillment. Carlisle Technology provides and supports **fully integrated plant floor data collection and inventory solutions**, which enable full internal traceability as well as process visibility. Due to Carlisle's broad expertise, maintaining or improving productivity during the data collection process is a key consideration in all our systems.



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