Time and Cost Savings:

Making the Switch from Paper to Paperless System for Maintenance Depts in the Food Industry

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Doing More with Less

Costs associated with maintenance and repair (M&R) are a normal and expected cost of facility operations. However, now more than ever, maintenance departments are pressured to do more with less resources.

Some of the factors pressuring maintenance departments to strive for higher productivity with less resources include:

- Pressure from the business to minimize overhead costs
- High expectations for equipment up-time and performance, therefore high expectations for rapid-response maintenance
- Strict standards for equipment maintenance, sanitation and allergen detection in food facilities
- Higher employee turnover rates, resulting in a smaller number of human resources and/or human resources that lack experience and know-how
- Retirement of the baby boomer generation, who take their decades of valuable experience and knowledge with them

Whether a maintenance department is managing all of these challenges or just some, a solution that saves both time and money would greatly improve operational efficiency.

Doing more with Less Paperwork

If maintenance departments could eliminate one thing from their day-to-day operations, going paperless would provide a number of benefits. Paperwork creates a bottleneck in the maintenance process, and paper-based maintenance departments can quickly and easily streamline operations by going electronic.

Other benefits of transitioning from a paper-based to a paperless, software-based system include:

- Reduction in errors caused by transcription and multiple paper entries
- Reduction in lost paper, resulting in lost data and work orders
- Reduction in office staff time spent sorting, filing, distributing and generally managing paperwork
- Reduction in maintenance personnel time spent picking up and dropping off work orders, checking paper inventory records and other paper-related tasks needed to complete tasks
- Ability to access real-time information anytime, anywhere from a mobile software solution

A paperless computerized maintenance management system (CMMS), such as SOMAX, solves these problems by providing a centralized electronic resource for work orders, inventory, equipment and maintenance history. A CMMS eliminates the errors caused by transcribing information onto paper, and increases productivity with the ability to access information in real-time from a desktop or mobile device regardless of location.

How to Calculate Time and Money Savings

There is no doubt a centralized repository for data represents time and cost savings by reducing human error associated with multiple paper systems. However, those benefits are not included in this Time/Cost savings analysis. Instead, this report focuses on a reliable, consistent method for calculating time and cost savings based exclusively on time spent managing paperwork and creates a compelling case for migration to a CMMS.

Specifically, this analysis accounts for the time spent processing paperwork for each of the three transactions listed below, not the actual time spent doing the work:

1. Time spent processing paperwork per work order for **corrective maintenance**
2. Time spent processing paperwork per work order for **preventative maintenance**
3. Time spent managing work order per part during an **inventory transaction**

Real Examples of Time and Money Savings

The time and money savings using the three criteria from the section above has been applied to SOMAX clients throughout the food manufacturing industry. Here are examples from two commercial bakeries, a dairy facility and a protein plant.

Three Line Bakery

Based on a commercial bakery, here is a summary of the average time for the paperwork managing the following tasks:

Average number of minutes needed for managing the paperwork:

- Per work order for Corrective Maintenance: 13 minutes
- Per work order for Preventive Maintenance: 2.5 minutes
- Per parts Inventory Transaction: 9.5 minutes

Average number of transactions per month:

- Per work order for Corrective Maintenance: 332
- Per work order for Preventive Maintenance: 424
- Per parts Inventory Transaction: 277

Based on the average time spent every month, average labor costs and the money invested in a paperless software solution, the net annual cost savings for a three line bakery amounts to $50,652. (More details about the time/cost savings can be found in the Appendix)

Five Line Bakery

The capacity and savings increase in a five line bakery. Based on a commercial bakery, experience showed the average time needed for the paperwork managing the following tasks:

Average number of minutes needed for managing the paperwork:

- Per work order for Corrective Maintenance: 13 minutes
- Per work order for Preventive Maintenance: 2.5 minutes
- Per parts Inventory Transaction: 9.5 minutes

Average number of transactions per month:

- Per work order for Corrective Maintenance: 1,352
- Per work order for Preventive Maintenance: 1,338
- Per parts Inventory Transaction: 1,663

Based on the average time spent every month, average labor costs and the money invested in a paperless software solution, the net annual cost savings for a five line bakery amounts to $143,684. (More details about the time/cost savings can be found in the Appendix)

Ice Cream Plant

Savings have also been realized in the dairy industry as seen with this ice cream plant. Experience showed the average time needed for the paperwork managing the following tasks:

Average number of minutes needed for managing the paperwork:

- Per work order for Corrective Maintenance: 13 minutes
- Per work order for Preventive Maintenance: 2.5 minutes
- Per parts Inventory Transaction: 9.5 minutes

Average number of transactions per month:

- Per work order for Corrective Maintenance: 357
- Per work order for Preventive Maintenance: 499
- Per parts Inventory Transaction: 143

Based on the average time spent every month, average labor costs and the money invested in a paperless software solution, the net annual cost savings for the ice cream plant amounts to $36,329. (More details about the time/cost savings can be found in the Appendix)

Protein Plant

The same methodology has been applied in the protein processing industry, as seen with this example. Based on a protein plant that processes poultry, experience showed the average time for the paperwork managing the following tasks:

Average number of minutes needed for managing the paperwork:

- Per work order for Corrective Maintenance: 13 minutes
- Per work order for Preventive Maintenance: 2.5 minutes
- Per parts Inventory Transaction: 9.5 minutes

Average number of transactions per month:

- Per work order for Corrective Maintenance: 189
- Per work order for Preventive Maintenance: 940
- Per parts Inventory Transaction: 169

Based on the average time spent every month, average labor costs and the money invested in a paperless software solution, the net annual cost savings for the protein processing plant amounts to $39,487. (More details about the time/cost savings can be found in the Appendix)

Wasted Time Versus Quality Time

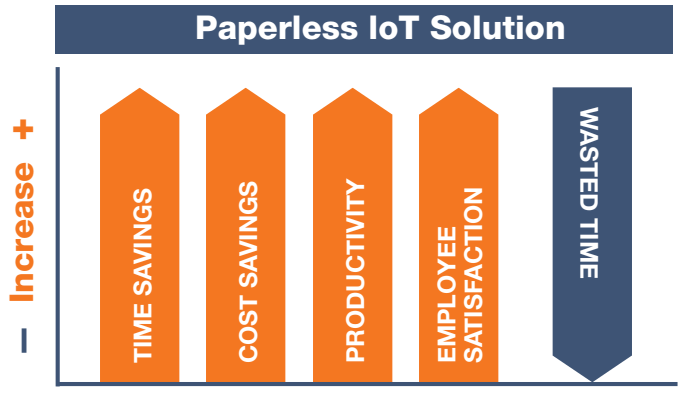
Time is a precious commodity, as it represents both labor costs and opportunity costs. Committing to undergo a transition to a new paperless system also presents an opportunity to choose a solution that includes Internet of Things capabilities, which empowers facilities to convert the newfound time savings into more rewarding, productive, quality time.

A solution that integrates Internet of Things (IoT) capabilities with a paperless solution offers benefits in addition to the efficiencies associated with a CMMS solution. By choosing a software that integrates the two, maintenance departments will be able to convert wasted time into quality time doing productive work which is even more significant in industries faced with a shortage of qualified workforce.

A study by the American Bakers Association reveals more than 90 percent of baking companies report finding talent to be a challenge, with more than one-third ranking it as a significant challenge. While raising the pay rate is an easy solution for recruitment, an even better (and more economical) way to attract and retain qualified maintenance talent is by offering a more rewarding workday. By equipping employees with an IoT solution that reduces the stress of constantly putting out fires, companies are also empowering employees to proactively manage small problems before they escalate. A decrease in job-related frustration results in a decrease in employee turnover.

Ultimately, transitioning from a paper-based maintenance department to a paperless solution is a quick and easy way to streamline operations that immediately results in significant time and cost savings. Taking advantage of the transition to select a software offering IoT capabilities ensures the time saved is time well spent.

Ready to learn more about a paperless IoT solution? Contact us today.



Paperless + The Internet of Things

The Internet of Things (IoT) is revolutionizing how we interact with the world around us by providing connectivity to things we utilize daily. Examples include connectivity to smart thermostats, smart appliances and connected cars.

The Industrial Internet of Things takes the same concept to the next level by blending connectivity and mobility for advanced maintenance management.

Today, maintenance departments can leverage IoT to collect real-time data on manufacturing equipment through wireless sensors, and be alerted of small problems before they escalate into big problems.

This forward-thinking approach empowers facilities to streamline the troubleshooting process, prevent unscheduled downtime and has saved manufacturing facilities significant time and money.

It can also make for a more rewarding work day, as maintenance employees can spend time doing more rewarding work rather than stressful crisis management.

Appendix

Three Line Bakery Cost Savings, Paper Versus Paperless	Minutes of Labor Needed per Record	Number of Records	Total minutes SAVED per month	Total hours SAVED per month	Labor COST SAVINGS per month	Monthly Cost of SOMAX Software (Paperless IoT Solution)	Annual Cost Savings
Estimated Labor Savings per Task							
Per Work Order for Corrective Maintenance	13	332	4,316	72	$2,517.67	$450.00	$24,812.00
Per work order for Preventive Maintenance	2.5	424	1,060	18	$618.33	$0.00	$7,420.00
Per Parts Inventory Transaction	2.5	277	2,632	44	$1,535.04	$0.00	$18,420.50
				Annual Labor Savings			$50,652.50
Estimates based on actual plant data from 2 Line bread and bun plant.							
Times do not include time spent doing the work, just time processing the paper.							

Appendix

Five Line Bakery Cost Savings, Paper Versus Paperless	Minutes of Labor Needed per Record	Number of Records	Total minutes SAVED per month	Total hours SAVED per month	Labor COST SAVINGS per month	Monthly Cost of SOMAX Software (Paperless IoT Solution)	Annual Cost Savings
Estimated Labor Savings per Task							
Per Work Order for Corrective Maintenance	13	1,352	17,576	293	$10,252.67	$1,200.00	$108,632.00
Per work order for Preventive Maintenance	2.5	1,338	3,345	56	$1,951.25	$0.00	$23,415.00
Per Parts Inventory Transaction	9.5	175	1,663	28	$969.79	$0.00	$11,637.50
				Annual Labor Savings			$143,684.50
Estimates are based on actual plant data from a standard 2 Line 50 user bread and bun site.							
Times do not include time spent doing the work, just time processing the paper.							

Appendix

Three Line protein plant based on a standard 20 user site.	Minutes of Labor Needed per Record	Number of Records	Total minutes per month	Total hours per month	Labor Savings per month	CMMS Monthly Cost	Annual Cost Savings
Estimated Labor Savings per Task							
Per Work Order for Corrective Maintenance	13	189	2,457	41	$1,435.00	$450.00	$11,820.00
Per work order for Preventive Maintenance	2.5	940	2,350	40	$1,400.00		$16,800.00
Per Parts Inventory Transaction	9.5	169	1,606	26.7	$34.50		$11,214.00
				Annual Labor Savings			**$39,834.00**

Appendix

Seven process cell ice cream plant savings are based on a standard 50 user site	Minutes per Record	Records	Total minutes per month	Total hours per month	Labor Savings per month	CMMS Monthly Cost	Annual Cost Savings
Estimated Labor Savings per Task							
Per Work Order for Corrective Maintenance	13	357	4,641	77.35	$2,707.00	$1,200.00	$18,087.00
Per work order for Preventive Maintenance	2.5	499	1,248	20.79166667	$727.71		$8,732.50
Per Parts Inventory Transaction	9.5	143	1,359	22.64166667	$792.46		$9,509.50
				Annual Labor Savings			**$39,834.00**