CM1X

One platform for quality, risk & compliance

How to Digitally Transform Your Restaurant's Food Safety System

Restaurant brands are increasing their use of digital technology to enable line checks, temperature monitoring, and other HACCP compliance-related procedures to ensure food safety, quality, and consistency.

This eBook outlines the benefits of going digital and how to make the switch from traditional "pen and paper" procedures.

Improving Food Safety and Quality — The Difference Between Success and Failure

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Restaurants operate on razor-thin margins

Currently, the industry-wide average ranges from **3% to 5%.** Even McDonalds — which is in the 99th percentile of all chains—fluctuates between 10% to 30%. And, with narrow profit margins and fierce competition, there's little room for error. This is especially true in a digital, social media-driven world where one bad customer experience or food safety incident can result in a public relations crisis and can erode trust in your brand. Going into 2021 and beyond, margin pressures are expected to become even more intense, making quality, risk and safety management more important than ever.
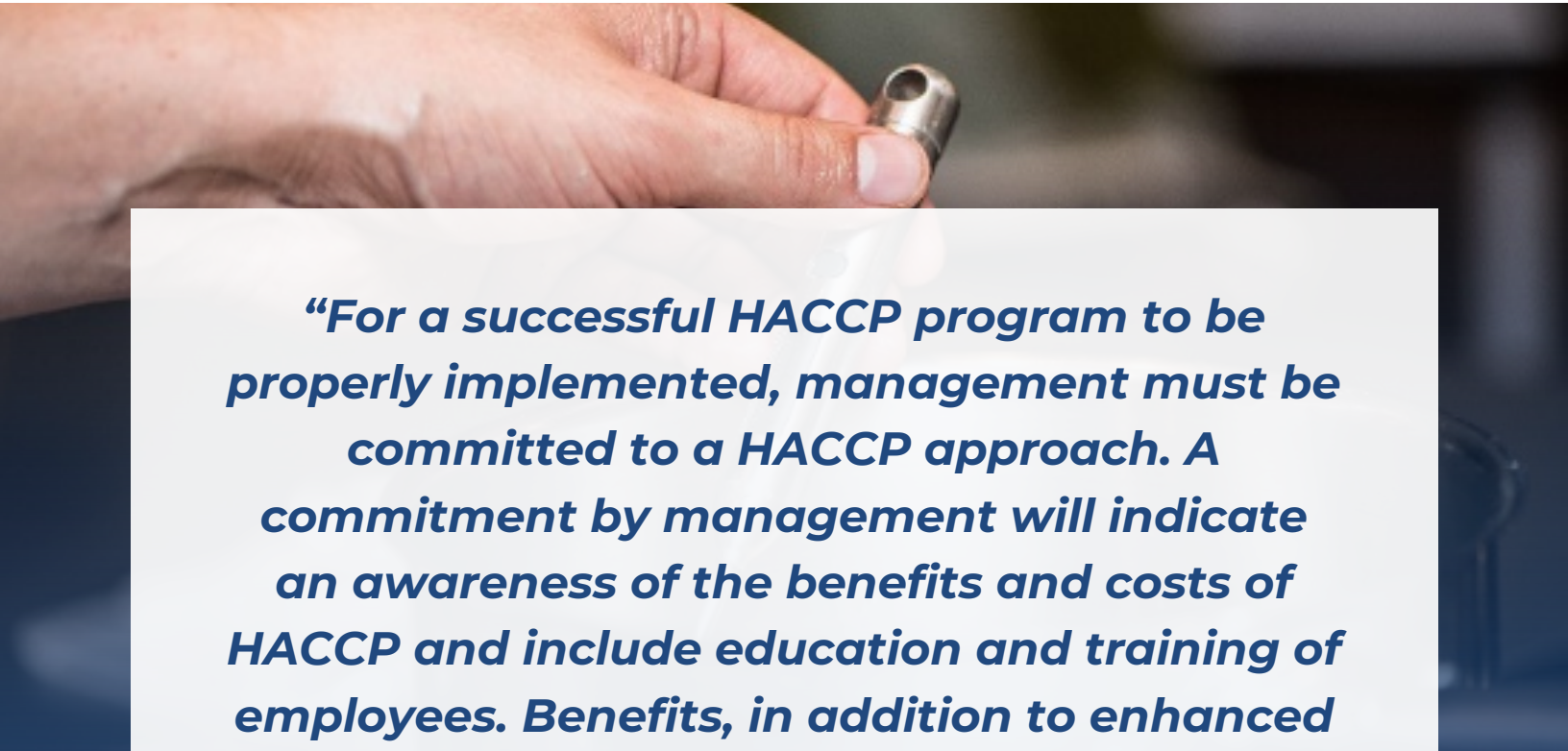
For decades, food processing facilities have depended on Hazard Analysis and Critical Control Points (HACCP) processes as a key tool in maintaining food safety and quality and reducing risk in their final product. Composed of 7 principles, the HACCP framework consists of a systematic approach to the identification, evaluation, and control of food safety hazards. But where most food producing facilities focus on one product at a time, retail and food service establishments face a broad range of conditions and work with several types of food to produce a final product. This led to the adaptation of the traditional "product" HACCP system into what is called "process" HACCP

> Process HACCP provides a uniform framework for restaurants to follow, to ensure food safety related to storage, handling, and cooking practices.

Today, an optimized food safety system and process could be the difference between success and failure in protecting your customers and preserving your brand's reputation, and ultimately its profitability..

Implementing a Process HACCP-based Food Safety Program for Your Restaurants

> *"For a successful HACCP program to be properly implemented, management must be committed to a HACCP approach. A commitment by management will indicate an awareness of the benefits and costs of HACCP and include education and training of employees. Benefits, in addition to enhanced assurance of food safety, are a better use of resources and timely response to problems."*

U.S. Food & Drug Administration USFDA. HACCP Principles & Application Guidelines

What is Process HACCP and How Should You Implement it in Your Restaurant?

For many decades now, HACCP has been successfully applied in food processing facilities, helping manufacturers to produce safe food for their consumers. Using a HACCP approach, they would focus on potential food safety hazards that might occur in the production flow.

But how does this apply to you?

Because food service and retail establishments have to deal with a wide range of products (each with its own process), it's necessary to modify the traditional HACCP approach in order for it to be more applicable. Instead of focusing on the end product, you apply the "process approach", looking at the whole flow of food through your establishment – from receiving to sales. You analyze any potential food safety hazards that may arise during this process and apply Active Managerial Control on each.

Most establishments make use of one (or all) of the following food preparation processes:

A — Receive – Store – Prepare – Hold – Serve

This process includes no cook step to kill potential illness-causing bacteria.

B — Receive – Store – Prepare – Cook – Hold – Serve

This process includes a cooking step (sufficient to kill off potential pathogens), but food also moves through the danger zone (40°F and 140°F) once.

C — Receive – Store – Prepare – Cook – Cool – Reheat – Hot Hold – Serve

This process includes multiple steps and foods move through the danger zone more than once.

Of course, these are only examples. Depending on your concept, other steps (like packaging and delivery) may be included before final consumption. For a fast-food restaurant, they may have a specific cook-serve process, with no holding step.
With such complicated processes, and multiple menu items, it's easy to see why a modified and specific Process HACCP approach is necessary for your restaurants. Instead of the arduous task of looking at every individual food product, you look at the process as a whole to identify potential food safety risks.

With the principles of HACCP, you can apply Active Managerial Control to get your whole team on board with a system that makes food safety a priority, protecting both your customer and your brand's reputation.

The 7 Principles of HACCP for Restaurants

The 7 principles of HACCP are used to identify, evaluate, and control the chemical, biological, and physical food safety hazards within restaurants. Using a typical chicken cooking process (Receive – Store – Prepare – **Cook** – Hold – Serve) as an example, the principles will look like this:

01 — **Conduct a hazard analysis** — You'll want to start by listing any potential food safety hazards related to your menu with the potential to cause illness or injury to your customer if not effectively controlled.

For restaurants, this means creating a list of food safety hazards related to your menu. It also includes how the food is stored, prepared, and cooked (if applicable), and which equipment is used. Overlooking one potential hazard could render the entire HACCP plan ineffective, even if you adhere to it diligently.

Example: Raw chicken is prepared for same day consumption. The potential food safety hazard is the risk of Salmonella bacteria if the chicken is not cooked properly. (a potential biological hazard).

02 — **Determine the critical control points (CCPs)** — Next, identify the points where hazards could be prevented, eliminated, or reduced to an acceptable level. While some processes form part of prerequisite programs (PRPs), critical control points are those processes where a control can be applied.

Restaurants should pay specific attention to food safety hazards that could lead to contamination (whether chemical, biological, physical). For each item on your menu, go through the food preparation process—from receiving raw materials to storage, and food preparation—and identify points where food safety is likely to be compromised.

Example: A critical control point could be where the raw chicken is cooked. The cooking step needs to be sufficient in order to destroy Salmonella or reduce the bacteria to a level safe for consumption.

03 — **Establish critical limits** — Next, you'll set the minimum and maximum CCPs necessary to maintain a safe environment and prevent, eliminate, or reduce food safety hazards to an acceptable level. Critical limits must be based on scientific factors, guidelines, regulatory standards, experts, or experimental results and can include factors such as pH, temperature, humidity, salt concentration, etc.

Example: In order to kill Salmonella, raw chicken needs to be cooked to an internal temperature of 165°F for at least 15 seconds. The critical limit would therefore be 165°F for 15 seconds.

04 Establish monitoring procedures – Going forward, you'll need to keep detailed records to ensure that the critical limits are adhered to. Ideally, the monitoring procedures are continuous and done electronically. Doing this will ensure increased accuracy, control, and visibility over the process as opposed to doing it intermittently and manually.

Monitoring a CCP is an important responsibility. Employees should be properly trained on the "why" and the "how". Once employees understand the impact of food safety hazards (e.g., outbreaks, product recalls, business closure, job losses, etc.), they are more likely to get on board with the HACCP plan.

Example: In order to monitor the internal temperature of the chicken, a clean (and sanitized) temperature probe should be placed in the thickest part of the chicken meat to ensure that a temperature of 165°F was reached for at least 15 seconds.

05 Establish corrective actions – Inevitably, issues will arise. You will need to create and record corrective actions to mitigate discovered hazards.

When deviations do inevitably occur, it's vital that corrective action be taken immediately:

a. First determine the root cause of non-compliance and then correct it by demonstrating the CCP is once again under control (re-examine the process if needed);

b. Establish the disposition of the product that is non-compliant;

c. Document the corrective actions that are to be taken in response.

It's crucial that you outline unique corrective actions for each CCP in advance, and list those in your HACCP plan. Instructions can include:

- What is to be done after a deviation happens;
- Who will be responsible for applying corrective actions;
- How and where the corrective actions will be documented.

Example: If the internal temperature of the chicken did not meet the requirements, it should continue cooking until 165°F is reached for at least 15 seconds. This additional time should be recorded.

06 Establish verification procedures – To maintain consistency and safety, establish checklists, verification, and operational routines for each daypart and shift throughout the week to verify whether your HACCP system is working. Also, having the management team perform routine self-assessments helps gauge overall compliance with regulatory bodies and brand standards. This also ensures your restaurants are ready for an audit by the local health department.

Example: the shift manager needs to review the temperature logs to ensure that the critical limit was met every time.

07 — **Establish record-keeping and documentation procedures** — Document all efforts to maintain food safety and quality, including the initial hazard analysis, the HACCP plan, the assignments, roles, and duties, to the support documentation confirming the procedures were fulfilled.

It's of vital importance to maintain proper records, particularly for auditing and inspection purposes. It allows you to keep track of raw materials, process operations, and finished products in your establishment. This will allow you to identify potential problem areas where deviations might occur.

Examples: of documentation related to the chicken cooking process would include: temperature monitoring charts (including notes on deviations and corrective actions), and supplier invoices.

To achieve Active Managerial Control, you would need more than HACCP principles. For a complete food safety management system, you'd also need to implement prerequisite programs—general control measures that have to be implemented in your establishment, regardless of what the process is. These will include components like personal hygiene, waste management, cleaning and sanitation, etc.

In the past, implementing a HACCP system meant relying mostly on manual procedures, pen and paper checklists, and managerial oversight. But that model has become outdated and unsustainable, particularly for larger chains with hundreds to thousands of locations.

Two Major Problems with the Traditional approach to Process HACCP

In the complex and dynamic operating environment of a restaurant, managers and team members face significant challenges in maintaining food safety, quality and consistency. Outdated, manual systems are no longer feasible, regardless of whether your brand operates on a local, national, or global scale.

Why is that?

1. Pen and Paper-Based Systems Are Insufficient

The conventional approach to food safety and quality monitoring is done manually via paper-based checklists and temperature logs. Staff members have to comply with these checks, not just daily, but sometimes hourly. Over time, this process becomes more difficult to maintain as there are dozens, if not hundreds, of CCPs that have to be regularly checked.

Once the initial paper-based inspections are complete, the data has to be logged manually in a spreadsheet or database if you want to perform any type of trend analysis or audit

According to Food and Safety Magazine, there are numerous disadvantages of using paper-based systems. They are labor-intensive and time-consuming, have a higher likelihood of errors, and record retrieval is inefficient.

In recent years, a growing number of restaurant chains have sunk significant capital investment into restaurant technology. But there are still a few "hold out areas" when it comes to operations. One particular culprit is paper checklists.
And these create their own set or problems:

Pencil whipping – A common quality control issue, "pencil whipping" occurs when paper checklists and forms get filled out by the employee without them actually performing the task or conducting the observation. When this happens, the quality checks, meant to ensure safety and maintain quality standards, are rendered useless

Poor visibility – Managers lack transparency and visibility into the operational status and performance of their restaurants. This makes it incredibly difficult to maintain quality and consistency, or to highlight trends or areas for improvement. This can be damaging to the overall customer experience, as well as your brand's reputation.

Lack of accountability – Lack of accountability remains to be one of the largest drawbacks of pen and paper checklists. There is no way to verify whether the checks were completed, if it was done properly and at the scheduled time, and by whom it was done. For a restaurant chain, the problem grows exponentially—there's simply no way to ensure that every location is following procedures and following through on addressing issues.

In short, a paper-based system is costly, hinders productivity, and fails to provide real-time recording. To make matters worse, there's an even more glaring vulnerability with such a system—it has to be performed and maintained by humans.

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2. Human Error and Negligence is Inevitable

People make mistakes. They forget things. They screw up.
Human error is inevitable.

Even with a perfect food safety program, humans have a tendency to throw a wrench in the best-laid plans—whether by incompetence, laziness, forgetfulness, or honest error. It takes only one employee not following the plan for the entire process to break down. Your HACCP-based food safety system is only as strong as its weakest link. Time and again, brands that employ a non-digital HACCP process inevitably run into several human-related problems, including:

Employees	Company-wide failure	Overly complex	Improper or ineffective monitoring
that don't have the necessary expertise or knowledge in key Process HACCP areas, or lack motivation to repeatedly carry out and maintain best practices;	to instill the right attitude and skills for continued system maintenance and upkeep;	HACCP systems with too many CCPs;	and corrective actions, resulting from poor company culture, training, or verification.

Most of these issues can be chalked up to some combination of human error, poor company culture, and improper guidance and management.

But why?

Because it lacks the proper mechanism to enforce it. For that, the management, monitoring, and recording of your entire food safety process must be digitized.

7 Benefits of Digitizing Process HACCP

Pen and Paper — Out. Digital Automation — In

The traditional approach to implementing and monitoring a HACCP-based program is limited and outdated. Digital advancement in restaurant technology has fundamentally changed the way things are done. Now, many time-consuming and inefficient manual processes such as paper checklists can be automated.
It's time to ditch paper-based HACCP systems in favor of <u>IOT</u> sensors, Bluetooth thermometers, and formidable work management and operational execution software.

It's time to go DIGITAL.

What are the benefits of thinking forward and embracing the future?

01 — **Increased accountability** — Digitized HACCP processes, line checks, and checklists prevent "pencil whipping" and ensure that routine assessments and preventative maintenance are performed as expected. Automation software ensures tasks are scheduled at the right time and assigned to the right employees, it lets you see which tasks are being done, when they are done (checks are time stamped), and by whom they are done. This ensures that the food safety procedures and checks you put in place are actually followed and are being completed as expected.

02 — **Increased productivity** — Automating the process means you free up time for employees that could be better spent serving customers or running the restaurant. In addition, managers are alerted of issues, and are able to review logs and pull pertinent information far more efficiently.

03 — **Improved visibility and control** – Digital recording allows brands to access records centrally through the cloud for any restaurant at any time. It provides information, metrics, insights, and trends based on your corporate hierarchy, restaurant types, ownership type, and more. This gives brands complete visibility — from minute details to chain-wide processes — and enables them to make changes to their programs and ensure corrective actions are taken without having to physically visit a site — all in real time.

04 — **Get better data and more of it** — When you go digital with checklists, and utilize Bluetooth Low energy (BLe) probes and even IOT Sensors, you not only get much more data, you get more accurate data. The system can then use this data to perform the most accurate analysis and detect issues and trends.

05 — **Receive alerts about potential issues** — When automated monitoring sensors notice a potential problem (e.g., an out-of-range temperature control), they act as an "early warning system", warning employees before a more serious food safety hazard develops.

06 — **Improve record security and access** — By hosting all of your data in the cloud, you eliminate the need for storage space, filing systems, and physical security.

07 — **Ingrains brand standards and standard operating procedures (SOPs)** — Through digitization of hourly, daily, weekly, monthly and quarterly routines, both regulatory standards and SOPs for the brand become ingrained in the restaurant's culture. This cultivates a culture of continuous improvement and optimization focused on food safety and operational excellence— from entry-level employee to senior management.

Digitizing Food Safety and Quality with CMX

When you consider the multitude of hazards and critical control points in your restaurants, coupled with the number of menu items, locations, and frequency of staff turnover you may have, you can see why digitizing your restaurant's food safety and quality systems is a worthwhile investment.

But why go digital with CMX?

At CMX we've partnered with dozens of the leading restaurant brands, providing them with the digital tools and solutions they require to ensure quality, food safety, and consistency across the board.

SUMMARY   **ACTIVITY FORM**   ACTIVITY FINDINGS   ADMIN TOOLS   SUPPORTING DOCUMENTS

🕐 In Progress   (4 of 16)

Activity

HACCP Monitoring - Daily
- 🚩 General Information
- ✏️ Line Items
  - 🚩 Beef (Hot)
  - 🚩 Poultry (Hot)
  - 🚩 Pork (Hot)
  - Poultry (Cold)
  - Pork (Cold)
  - All Products: Dated/Labeled/Covered
- ✏️ Personal Hygiene / Uniform
- ✏️ Cleanliness - Interior
- ✏️ Cleanliness - Exterior

Line Items   🚩 3 Finding(s)

🚩 Beef (Hot) ❓

✔ 145.0 °F ✏️   ⚠ 125.0 °F ✏️   N/A

VIEW POLICY

Reason(s):*
- ☐ Temperature not set correctly
- ☐ Temperature device standard not properly implemented
- ☑ Temperature not set within recommended guidelines

Address Corrective Action Now 🔘

What Immediate Correction Will You Put In Place?
- ☑ Adjust temperature monitors to ensure that proper cook temperature are achieved

Additional Corrective Action:
Adjusted temperature to correct setting.

Expected Completion Date: *   **Person Responsible:** *
2/3/2021 ✕ 📅   Lisa Smith

Add Attachments 🔘 🔵

ISSUE: .
MEASURE1: Temperature: 145 °F
MEASURE2: Temperature: 125 °F

Here are just a few examples of restaurant chains who are using our ActivityStudio® solution, and have digitally transformed their food safety and quality programs

Click the company name to read their Client Success Story on our website

Firehouse Subs®

Uses ActivityStudio® to ensure brand consistency and compliance across their nearly 1,200 restaurant locations. Since launching the system in 2019, they've successfully completed more than 10,000 audits and assessments using ActivityStudio®. They recently started using ActivityStudio® to digitize their temperature logs, cleaning schedules, daily cash logs, and closing inspection and management walkthroughs in the restaurants.

> *"As we approach 1,200 locations, I couldn't even imagine trying to keep an eye on brand standards and food safety without a platform like ActivityStudio® in place. And for our corporate staff, be it at the executive or vice president level, to have this level of visibility into our opportunities and our strengths and areas that need improvement has been invaluable."*

RICH GOODMAN,
VP OF OPERATIONS SERVICES FOR FIREHOUSE SUBS

For **Checkers and Rally's**

ActivityStudio® stood head and shoulders above all the other software options they evaluated. They've implemented **Activity**Studio® in their nearly 900 locations for daily HACCP-based line checks, and food safety and brand standards self-assessments.

> *"My jaw dropped when I saw how integrated ActivityStudio® already was – so many things are automatically taken care of through simple configurations and automation. What used to take hours can be accomplished in minutes. And with one platform, we have one system and no silos. ActivityStudio's user experience and user interface is cleaner and has a better flow, and it's incredibly easy to use. Our decision simply came down to ActivityStudio® and CMX as a partner, being a better fit for our business."*

DANIELLE WILLIAMS,
OPERATIONS SERVICES MANAGER AT CHECKERS & RALLY'S

Buffalo Wild Wings

chose ActivityStudio® as the ideal solution to manage their operating procedures and protocols, execute audits and self-assessments, and checklists designed to ensure food safety and operational excellence. And they rolled out the entire solution to all their 1,250 locations in just 30 days! As a bonus benefit of having ActivityStudio® in place when the COVID-19 crisis struck, they were able to quickly adjust their policies and roll out new procedures to ensure their employees and customers continued to be safe. All while changing their business model from dine in services to carry out, curbside pickup, and delivery.

"We consider ActivityStudio® to be a game-changer. With ActivityStudio® we are better able to manage and maintain high-quality standards and consistency across all of our sports bars."

DREW ROBERTS, DIRECTOR,
BRAND OPS PERFORMANCE AT BUFFALO WILD WINGS

Digitally Transform Your Restaurant Operations with ActivityStudio®

ActivityStudio® makes it easy to develop and execute digital audit, self-assessment, inspection, and checklist based Operational Excellence programs to ensure quality, safety, and consistency in your restaurants.

> *"ActivityStudio's intuitive interface makes it very easy for our team to develop and execute programs to ensure all sports bars are compliant and operating with consistency. The impact on Operational Excellence has been impressive and immediate for Buffalo Wild Wings."*
>
> *- DREW ROBERTS,*
> *DIRECTOR, BRAND OPS PERFORMANCE AT BUFFALO WILD WINGS*

Available as a stand-alone solution or as an integrated part of CMX1's EQMS platform, Activity Studio**® delivers the following features and benefits:**

Digitize ANY form or routine With **Activity**Studio®, there's no need for costly, time-consuming software customizations. Restaurant brands can digitally transform all their paper-based auditing, self-assessment, inspection, and checklist programs all on their own. What used to take hours can now be accomplished in mere minutes.

An **intuitive, visual form builder** allows for drag-and-drop functionality to create anything from complex audit forms to simple checklists. Forms can be linked back to policies and SOPs, helping you to reinforce brand standards and promote know-how in your restaurant.

Integrated policy management allows you to create policies, procedures, and training documentation. Leverage the visual designer, rich text editor, and document storage to publish materials to specific user groups in real-time.

Perform activities on-the-go Users can work both on and offline using a browser or with native apps for Windows, iOS, and Android. This means you can perform restaurant audits or do daily checklists connected or disconnected from the internet. Additionally, thanks to being cloud-based, data is instantly available to other team members, and centrally for reporting and analytics once you are back online and the data has seamlessly synced.

> *"... the routines we've automated with CMX have been our restaurant quality and food safety assessments. We believe that part of the continuous improvement processes is regularly self-assessing your performance."*
>
> **– AARON CLARK,
> SENIOR PROJECT SPECIALIST, RESTAURANT FOOD SAFETY TEAM AT CHICK-FIL-A**

Optimize repeatable processes in your restaurant by using specific settings for assignments, notifications, reminders, and report distribution. This ensures workflow flexibility and operational efficiency.

Automated scheduling prevents pencil whipping and allows you to set and monitor recurring schedules for all programs and activities, making sure it's done by the right people, at the right time, and in the right way.

Bluetooth Low Energy (BLe) integrated devices such as barcode scanners, temperature probes, and digital scales allows for uniform measurements which can be traced back to the source—including users, dates, times, and locations. We definitely have our preferences (and happy to share), but the platform is compatible with a variety of probes out-of-the-box.

IOT Solutions – CMX1 supports a wide range of integrations with sensors and sensor networks for full environmental monitoring, as an example we partner and integrate with Digi's Smartsense IOT solutions. You can get a complete picture of what is happening with your equipment and the routines you've automated, all in one simple and easy to use interface.

> *"The repeat detection capability of ActivityStudio® is having an impact on our culture and behaviors. We are seeing much faster response times in identifying and addressing root causes for issues, to avoid impacting subsequent audits."*
>
> *- TIM FOSTER,*
> *SENIOR MANAGER OF TRAINING FOR FIREHOUSE SUBS*

FIREHOUSE SUBS

Identify repeat issues. ActivityStudio® can look back over previous activities and automatically detect repeat 'non-conformances'. You can leverage this information to detect more serious trends, and can apply certain rules that impact their ratings and post activity workflows and notifications if desired.

Powerful and actionable insights allow you to keep track of your restaurant's analytics. With data visualization, KPIs and reports at your fingertips, you'll be able to measure your brand's performance with its defined goals and expectations.

Wait a minute... this sounds expensive and time consuming to implement!

Actually, you'll be surprised just how affordable **Activity**Studio® is and how quickly you'll be able to roll it out in your restaurants.

Check out our Client Success Story for how Buffalo Wild Wings successfully rolled out **Activity**Studio® to over 1,200 locations, with multiple different audits and self-assessments in less than 30 days!

"Compliance, food safety and guest and employee safety are not optional, they're a part of doing business. What we are experiencing with the Coronavirus just amplifies this. The ROI of investing in digital tools like ActivityStudio® is in the efficiency and automated documentation and record-keeping, allowing the field and regional general managers to get back to the business of serving and protecting our guests and employees."

**– DANIELLE WILLIAMS,
OPERATIONS SERVICES MANAGER
AT CHECKERS & RALLY'S**

The CMX1 platform can enable your restaurant brand to completely transform your operational routines, quality, and HACCP-related procedures. And when you partner with CMX, you'll benefit from the innovation and learnings we've gained from working with leading restaurant brands for more than 10 years running.

Together, we can automate your restaurant operations - to ensure your brand standards and regulatory guidelines are followed, ensuring quality, food safety, and operational consistency - which ultimately impacts customer satisfaction, growth, and profits.

If you want a digital partner that knows restaurant operations, look no further. Reach out to the expert team here at CMX today.

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CMX
One platform for quality, risk & compliance

CMX is your Food Safety System Technology Partner

If you're looking for ways to improve your Restaurant's Food Safety Systems – we can help.

CMX1 is a cloud-based EQMS platform trusted by some of the world's best know restaurant brands to empower lasting customer trust through consistent quality, safety and customer experience at scale.

To learn more, please visit us at:

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Get In Touch