

International rollout of a digital HACCP management system.



HACCP in a globalized world.



HACCP was originally developed for NASA in 1959 to ensure the safety of astronauts' food and the associated success of space missions. The concept has now been developed globally as a tool for protecting consumers against foods which could cause them illness or injury.

Globalization gives additional importance to a universally valid quality assurance tool like HACCP: in a globally networked economy, there are no longer any purely local problems. In exactly the same way as news spreads all over the world in just a few minutes via the Internet and social media, a seemingly minor incident in an individual restaurant can develop into a serious food scandal overnight, threatening the image and turnover of the whole brand.

However, digitization also represents a great opportunity for quality managers in restaurant chains. Because, in just the same way that digital transmission of information is more efficient than analog transmission, digital management of HACCP also offers more opportunities than risks. In particular, classic, paper-based HACCP implementation has numerous disadvantages. This white paper will explain the interplay between all these factors and what needs to be kept in mind when rolling out an HACCP management system.

Disadvantages of analog HACCP management.

It is above all pen and paper that are used to implement HACCP, even in the 21st century. This method, which has not changed for almost 60 years, carries an immense risk potential. Firstly the obvious: wherever people work, mistakes happen. Especially in organizations which are characterized by time and cost pressures. Here it quickly becomes the case that the toilet cleaning checklist for the whole week is filled out on one single day or readings which have been noted down are illegible for colleagues on the next shift.

And every day of analog HACCP implementation means ever growing mountains of paper and shelf space filling up with folders. That is laborious and cost-intensive. In particular, it would make more sense to invest the time needed for analog documentation in activities that add more value in the restaurant. The HACCP documentation requires a lot of effort in terms of its creation and is also difficult to analyze. Everything is indeed in black and white somewhere – but where exactly is often unclear. And when it really

matters and, after a customer complaint, you need to find out that the temperature was adhered to during storage, valuable hours are lost. It is almost impossible to ensure a prompt response and intervention when there is a problem. In turn, that makes it more difficult for managers to ensure reliable compliance with QA standards.

Implementing HACCP with pen and paper is laborious for staff and has a negative influence on staff satisfaction. This is therefore growing in importance at the moment across different sectors. Especially in restaurant chains: on the customer's side of the counter, digital concepts are already increasingly used here – but behind the counter there is often no trace of these kinds of contemporary ideas.

In summary, it can be said that analog HACCP management is outdated and prone to errors, as well as being both time-consuming and cost-intensive, meaning it does not necessarily constitute the right tool for such a sensitive issue as food safety.



Paper mountains can be avoided by a digital HACCP management system.

Advantages of a digital HACCP management system.

Digital HACCP management addresses these points and offers sustainably efficient solutions for the two greatest problem areas of analog implementation. It has also been possible to envisage an improvement in terms of staff satisfaction.

- **Enhancing quality.**

A tablet is often an integral part of a digital HACCP management system. This is where individually defined quality controls and limit values are stored in advance. Efficient text and image support enable the tablet to guide users through the relevant quality controls safely and reliably. If a reading does not meet the specifications, the stored corrective action makes it clear straight away what needs to be done. Readings are transmitted directly to the Cloud and can be accessed there at any time with internet-capable terminal devices.

All the standards defined in the system are always up to date and globally consistent across all restaurants. However, country-specific requirements can also be mapped. This ensures that customers in every restaurant – no matter whether in Bangkok, Boston or Berlin – always get the consistent high quality which they expect from a brand.

In addition, the digital networking of quality assurance tools across national borders and time zones enables both headquarters and the local restaurant to respond quickly and easily to new challenges.

- **Reducing costs.**

Just as a navigation device gets you more reliably and quickly to your destination than a map, a digital HACCP management system also ensures you can comply with HACCP regulations more efficiently than with analog methods. The greatest potential saving here involves the automation of specific controls – for instance through permanently fitted sensors at critical points in a restaurant. The guided processes and checklists also make it possible to work through the additional quality controls more efficiently and with a reduced amount of human error.

Two examples show how the right measuring technology in combination with appropriate processes lower costs, assure quality and reduce waste:

a) Cooking oil

A cooking oil tester, such as the testo 270 model, determines the quality of cooking oil easily and reliably. To do so, the so-called "Total Polar Materials" (TPM) component in the oil is measured and given as a percentage. A raised TPM value indicates oil which is too old, which would produce bad-quality deep-fried goods. The oil can also contain substances which present a risk to health. Regular measurement also prevents cooking oil being replaced too soon. That can reduce cooking oil consumption by up to 20%. With a consumption of 1,000 litres per month and assuming a price of €0.70 per litre, this enables an annual saving of €1,680.

b) Energy costs and waste

Online data loggers permanently monitor temperatures and transmit the readings directly to the Cloud or the tablet. This makes manual controls superfluous, thus saving considerable time for those responsible. The monitoring of door opening times of refrigerated and freezer rooms saves energy and also prevents food from being disposed of due to inadequate refrigeration.

Requirements for a digital HACCP management system.

The prime objective of a digital HACCP management system has to be **to protect consumers against health risks**. Accordingly, prevention is the most important factor: It must be ensured that there is no chance of an emergency occurring in the first place. Accordingly, a digital system must make sure that controls, and if needs be corrective actions too, are carried out correctly and promptly.

The system must also be really easy to handle and quick to understand. Amongst other things, guided quality controls are fundamental in terms of staff satisfaction: experienced employees are given a feeling of security during transition and new team members can be integrated easily.

The system must of course provide highly efficient, and above all reliable, support for managers in the event of a problem. Because the right answers should be available at the touch of a button when there are customer complaints and not buried in mountains of documents.

Challenges before rollout.

Before the global introduction of a digital HACCP management system, you should ask a few important questions. The more thorough and critical you are in this

respect, the easier the transition process will be for all those involved and the better you will be able to use the system later.

- Is documentation still done by hand in all quality-related areas? If digital solutions are already being used in individual cases: What kinds of experiences have been had with these and how can they be integrated into a global solution, if applicable?
- How exactly are the manual quality controls carried out at the moment and what possibilities does a digital system offer in terms of improving and optimizing the established processes?
- Who is responsible at a local and global level in the event of an emergency? Is the information cascade clearly defined? Is there a clear and uninterrupted substitution rule?
- What regional differences are there in terms of regulations? These should also reappear later in the digitized quality handbook. This is the only way the digital HACCP management system can deal with local conditions.
- Are there seasonal or time-restricted quality controls?
- Who is responsible for planning the transition? A change in workflows which accompanies a transition to digital HACCP management must be well planned and all stakeholders involved must be brought on board beforehand.

Would you like to manage HACCP digitally? These are your next steps.

If you are thinking about replacing pen and paper with tablet and Cloud, it makes sense to have a closer look at the following issues. For a detailed breakdown, including a project plan, your solution partner will support you with advice and practical support.

Firstly, the planning of the whole transition process should be as clear and detailed as possible. Differentiating between planning, test and rollout phases has proved to be beneficial. In addition to the process managers of the restaurants concerned, representatives of the HACCP management system developer should also be involved in the planning phase. Their experience of past rollout projects represents a valuable store of knowledge for you.

For efficient planning, it is also essential to know all the internal processes which will be affected by the new solution. The prompt involvement of all stakeholders also links in with this. In this respect, it is above all colleagues involved in day-to-day business activities (operations) who are crucial, because their daily processes will be completely changed. The following are also important:

- Quality Assurance
- Equipment Management
- Purchasing
- IT
- Regional Managers/Franchisees
- Restaurant Managers
- Local Employees

After that, a thorough examination of the current quality handbook is recommended to make sure it is up to date and for any possible optimizations which are now possible for the first time with a digital system.

And in order to be reliable over the long term, the scalability of the solution must be checked. This is best achieved through a meaningful pilot project, which takes regional particularities into account and is coordinated across regions. Once this pilot phase is completed, the desired solution can be individually tailored and a rollout planned in a targeted way.

Do you have any questions about the advantages and opportunities of a digital HACCP management system or would you like some individual advice on how your organization can benefit from a solution of this kind? **Then give us a call or send us an e-mail.**

About us: introducing Testo.



Testo, with its headquarters in Lenzkirch in the Black Forest, is a world market leader in the field of portable and stationary measurement solutions. There are 2,700 employees involved in research, development, production and marketing for the high-tech company in 33 subsidiary companies all around the world. Customers all over the world are impressed by the measuring technology expert's high-precision measuring instruments and innovative solutions for the measurement data management of the future. Testo products help save time and resources, protect the environment and human health and improve the quality of goods and services.

An average annual growth of over 10% since the company's foundation in 1957 and a current turnover of over a quarter of a billion Euros clearly demonstrate that the Black Forest and high-tech systems are a perfect match. The above-average investments in the future of the company are also a part of Testo's recipe for success. Testo invests about a tenth of annual global turnover in research and development.

More information at www.testo.com