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Let's talk about Digital QA traceability and audit management



integreater
food processing software

GUIN



Let's talk about digital QA, traceability and audit management

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Through SI's real-time controls and end-to-end traceability, our customers are always audit ready.



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Hardwiring traceability, digitalising QA - an expert overview

Within this latest "We Think Food" guide from SI, Rob Stephens explains how, by hardwiring traceability throughout your processes, food manufacturers can be assured that there isn't anything that can go wrong, when it comes to knowing everything about the goods entering and leaving your business premises.

At SI delivering a hardwired traceability solution is all about understanding how to digitise your end-to-end processes, so that all manual inputting is removed and any opportunity for manual data intervention is carefully managed. By taking this approach, any manual errors that may have previously occurred are eliminated, ensuring the accuracy of all traceability data.

In addition to digitising traceability data capture, food processors now have the opportunity to remove the manual paperwork or data entry associated with the QA process. This can be achieved by using QA modules that can be added to an SI system or integrated into the existing ERP management solution used in the factory.

By combining traceability with digital QA, food processors can prove food provenance, whilst delivering the highest standards in quality, supported by supply chain partners that information can be shared with.

Quality Assurance Entry TSA1078 1.0.0

Product Temperature?	4.8
Vehicle Temperature	2.3
Security Seal Intact?	Yes
BQAP or EU Approved	BQAP
Pests and Foreign Bodies?	BQAP
Product in Spec?	Yes
No Excess Blood Fat	Yes
Vehicle F/Bodies Pests	

“

We feel that we can complete any audit within any time limit.

Baird Foods Services

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Introduction

Why digitalising the QA manual is the only way to achieve compliance with the latest FSA, BRC standards and food auditing requirements



Rob Stephens, SI's CEO, explains why digitalisation of the QA manual is the only way forward for food manufacturers to achieve compliance with new

food standards requiring greater levels of traceability granularity.

The way that QA is managed across the perishable food sector is under the spotlight like never before. And the requirements are only going to become more complex, as the auditors from the FSA, other regulatory bodies and customers continue to demand more information and proof.

For every food manufacturer, food safety and regulatory compliance is exceptionally important. When the 2018 BRC Global Standards for Food Safety (Issue 8) was published, it was clear to me that the new standards delivered a significant challenges in terms of proving compliance, document control and reporting.

To meet the challenges set by Issue 8, there would have to be a virtual bonfire of manual QA paperwork, as the only way to achieve full compliance will be by digitalising all QA and traceability processes.

Raising the bar for audit information

What the BRC did with Issue 8, was raise the bar for the requirements of available audit information and traceability. For instance, enhanced emphasis

The BRC also encouraged businesses to further develop systems for security and food defence. Again, the most effective way of meeting this recommendation is with real-time data monitoring, collection and analysis.

In summary, the direction of travel continues to focus on accurate management of data and, in particular, ensuring that every business can provide one version of the truth. This can only be achieved effectively by digitalising the QA manual. Otherwise, food businesses cannot ensure that the hundreds of QA tasks required at different times - from hourly checks to weekly, monthly and annual assessments have been correctly completed.



Improving QA process management

Examples of required QA tasks include:

- Raw material
- Line start up
- Product changeover
- Production line audits
- Metal detection
- Finished product.

Mitigating risks posed by manual QA processes

If a food processor still relies on paper-based records to manage either some or all of its QA processes, in terms of proof points, it's impossible to demonstrate that the information was obtained at that specific time and correctly reported. On the

But when QA information is powered by real-time data, individuals or teams can be alerted to required actions throughout the day, month and year electronically.

By digitalising the QA manual, food processors will eliminate the reliance on paper processes, fundamentally drive forward compliance and mitigate risk, and improve overall product confidence.

If we are to improve food safety, prevent product recalls and have the resources to innovate in other areas highlighted by the BRC, we must now act in real-time. Taking this digital approach will not only deliver the required granularity of detail, it will also have a positive impact on quality, food provenance, safety, and the industry's reputation as a whole.

Rob continued: "Recent breaches of food safety procedures have led to very high-profile interventions, resulting in great deal of harm to the industry's reputation as a whole. This in-turn has led to greater audit intervention from regulators and customers alike. Together with the

Food Standards Agency's (FSA) move towards a risk-based approach to inspecting food and drink businesses, every manufacturer now needs to be ready to swiftly respond whenever they are held to account. This is particularly the case now that unannounced audits are the norm.

Integrate compliance with a digital sign off

"There are ways to avoid these types of issues. For instance, when the required actions are digitalised, every one of these actions will be digitally signed off, creating an exact unchangeable record that is fully traceable.

Equally, by creating a digitally-led process, every daily line activity can be mapped out, such as for hygiene routines, where the line will be automatically prevented from starting if a cleaning process has not been completed.

In the 2018 Food Safety Survey by Food Manufacture, 78.4% of respondents believed that the burden of retailer and other hygiene audits had increased.



“When QA data is recorded on paper, it's impossible to prove that conformances and non-conformances at checkpoints have been accurately recorded.”

Case study: Falfish takes digital traceability to the next level

Cornish multi-species seafood processor, Falfish is one of the first businesses in its sector to embrace the benefits of digitally-led process control and traceability.

Talking about how Falfish has changed the way it manages traceability, managing director Mark Greet explained, "Falfish had been using SI's Stock and Order modular software for some time and, as part of the integration, we adopted a batch barcode approach to traceability. Thanks to the batch code data capture, we have a fully automated and auditable traceability system.

Each batch is assigned a unique code that also captures all relevant details that:

- includes all individual species barcode information.
- follows the product throughout the processing line.
- informs label generation details, whenever the produce is packed and dispatched, or put into cold storage.
- even provides complete mass balance calculations on all products and packaging.

SI's now digitalising Falfish's QA processes and has provided handheld devices for performing and logging all QA tasks, which in turn delivers real-time data to Falfish's technical managers.



“ Thanks to the batch code data capture, we have a fully automated and auditable traceability system. **Falfish** ”

Preventing product recalls

Every food recall is triggered by an event. Many of the most common causes of these events are as the result of poor planning, communications, manual processes and untracked failures within the manufacturing environment.

Take, for example, the contamination risks if hygiene processes and schedules haven't been correctly followed, whenever machinery has been washed down.

By avoiding the need to recall products, not only will significant commercial savings be made, but reputational damage will be avoided that could have had a disastrous impact on a business. In practical terms, preventing a product recall,

means stopping the problem product from leaving the building in the first place.

The power of real-time QA information

As Rob explained, "Of course, the challenge is how to link QA discovery to the individual batches, then knowing where these are located in real-time to prevent them leaving from the factory. This is all about speed of response and having the correct information at hand, to enable real-time decisions to be made about whether to put stock on hold or recall any vehicles that might be in transit.

"For example, it's the QA team that must ensure that production line food safety processes and equipment are working, by checking at prescribed intervals, and that the correct tests are carried out to confirm these actions. When the process is digitalised and part of an integrated system, the data-driven QA solution will confirm whenever these tests must be done, and the designated intervals."

Typical triggers for food recalls

- Food provenance issues
- Incorrect labelling
- Hygiene issues and machine contamination
- Allergen and recipe problems
- Safety monitoring machine failure
- Issues with manual controls and interventions
- Fraud



Preventing product recalls, continued...

“Then, as checks are carried out in real-time, live data capture directly updates the system. So, if one part of the production process fails, or a food safety issue is identified, all the products going through the production cycle between testing can either be quarantined or immediately recalled for re-testing.

“But, if the QA safety net is reliant on manual processes, the manufacturer would struggle to identify the products in time. The result could necessitate product recalls from the customers’ stock or, worse still, from retailer shelves.”

A vision for correct labelling

One of the key areas where it is important for QA and operational departments to work together is label management and verification. For example, by taking an integrated approach to push data to labelling equipment, via a centrally controlled production system, you will reduce human error.

Equally, if you have an online vision-based labelling verification system, you can synchronise data and ensure each label is correct. Data can then be stored with QA testing data to prove that the labelling system has been properly monitored and tested.



“ Across our range of weigh price labellers and outer case (OCM) labelling systems, SI delivers 100% consistency in label design and integrity across all 15 production lines. **Faccenda Foods (Avara Foods).** ”

Case study: End-to-end digital traceability with full mass balance weight calculations

Based in Crewe, pork processor Baird Foods Services always had a clear vision for how its traceability, QA and process control should operate. In 2016, SI took on the challenge to deliver a completely integrated solution for its new factory' within a strict 12-week leadtime, that required the whole process to be operational from day one.

SI technical experts developed a completely paperless and fully traceability solution.

"From day one, the team at Baird Foods Services made our solution part of its day-to-day operation and it has proved to be crucial to the success of the company's business model." explained Rob Stephens, SI's CEO. "In my opinion, Baird's is a shining example of how a business can be created by reaping the benefits of our real-time integrated food software and the full traceability it delivers.

"In fact, in recognition of its high standards, Baird Foods Services has recently been shortlisted for the 'Supply Chain Partnership' Food Manufacture Excellence Awards 2020."

Yield, mass balance and traceability

Kevin Horner, Baird's Factory Manager continued. "We process over 400 tonnes of meat products each week, for high profile pork processors and retailers. As all our raw material is customer-owned and we work to very tight tolerances, process control and reporting exceptionally important for us.

"When any product leaves our site and returns to the customer, there are three core principles which we always adhere to: yield, mass balance and traceability. These three principles provide our customers with the confidence that we always follow the highest standards, processes and procedures.

"For complete transparency, we send a daily report to each customer, detailing everything we've processed for them, including the yield, margin and mass balance achieved from each batch run. The end-to-end traceability proves to them that all of the end product has been produced from their own raw material".

Request our Yield, giveaway and Mass Balance Management guide



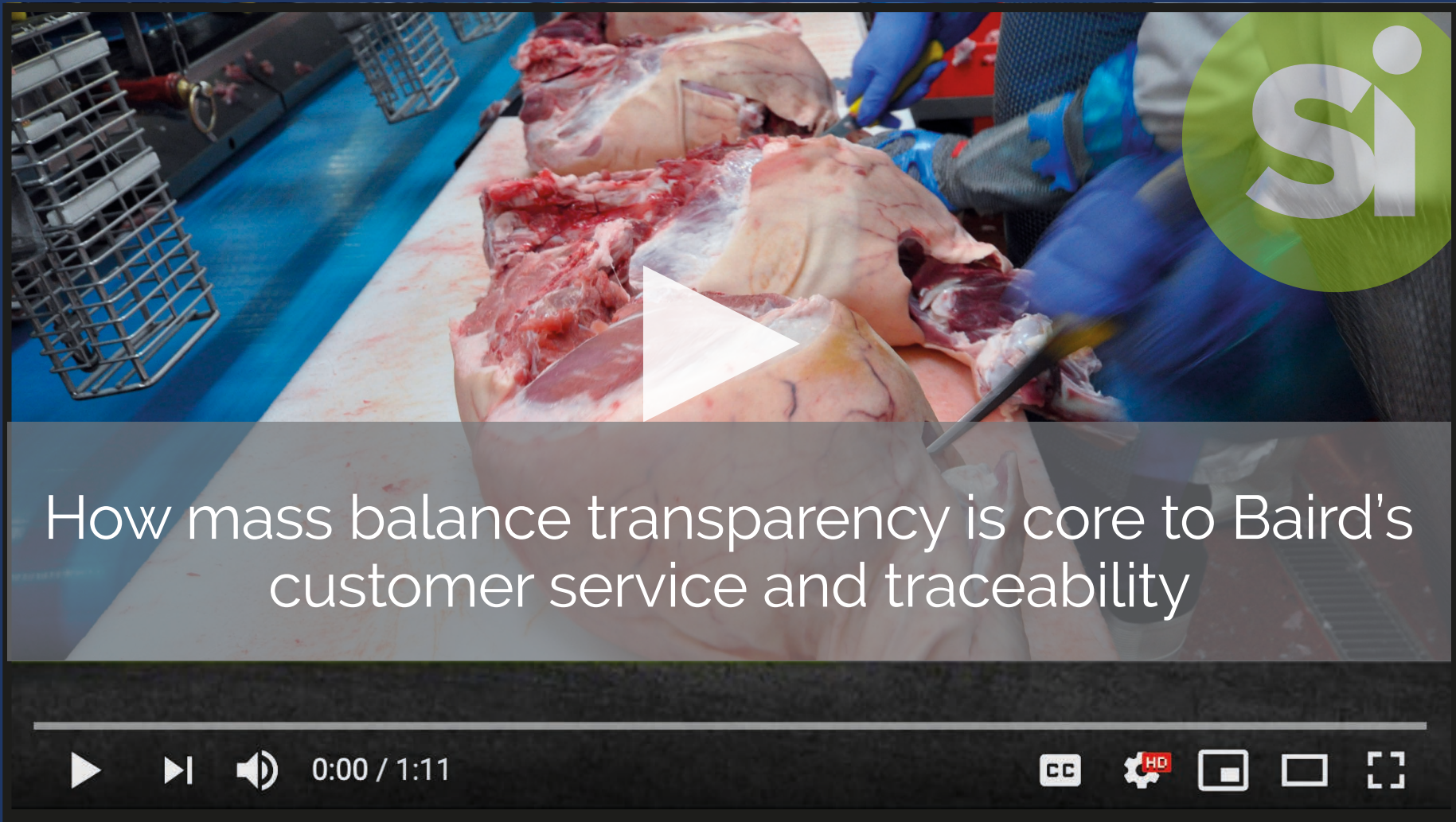
Audit, traceability and mass balance all in one report

Kevin continued, "For our business model to succeed, it's essential to have a system in place that digitally records and recalls all of our data, in real-time. Using SI's modular software solution, we can perform a mass balance and traceability report within the space of 10 minutes. This reporting delivers full visibility of every step of the process. SI has also set up a range of automated reports for us, with live data feeds, that can be run in seconds."

"As an example of just how well it works for us, for our first BRC audit, we were asked to carry out a full trace, right back to intake. Whilst the auditors observed the process within a few minutes. The auditors were shocked! They told us that they'd never seen a trace carried out so quickly, so completely, and with a mass balance built in!"

LINE NO:	Description	UOM	Qty	We
13	BF0001			
14	BF0002			
15	BF0003			
49	BF0004			
16	BF0008			
17	BF0010			
45	BF0012			
18	BF0013			
19	BF0014			
20	BF0015			
57	BF0017			
21	BF0021			
22	BF0022			
23	BF0023			
24	BF0024			
25	BF0025			
26	BF0033			
53	BF0040			
48	BF0041			
58	BF0051			
52	BF0052			
42	BF0053			
46	BF0054			

“After our first BRC audit, the auditors told us that they'd never seen a trace carried out so quickly, so completely, and with a mass balance built in. **Baird Foods Services**”



“ We can deliver a complete mass balance and traceability report within the space of 10 minutes. ”

Case study: Full traceability delivered in less time than it takes to make the auditor a cup of tea?

When family-owned meat processor, Pickstock, recently completed its major software integration project at its Grade A Hortonwood meat processing plant in Telford, enhancing its traceability was a core objective.

Having changed its approach to sourcing cattle, Pickstock now purchases animals directly from more than 5,000 farmers throughout the UK. To support this change, and in order to meet its current processing requirement of up to 2,500 cattle over a five-day week, the business needed to develop a new livestock payments and traceability system.

Working with SI, Pickstock specified a solution that enhanced its audit ready capabilities to maintain its Grade A status. The new solution

incorporated shop floor data capture for full traceability, passport scanning and veterinary health information.

As Hayley Draper, Pickstock Livestock Manager explained, "This has been a hugely significant step forward for us as a business, as we are regularly audited by our customers, and the British Retail Consortium (BRC). We are also certified by Assured British Meat, which enables us to display the Red Tractor logo on all our beef products.

"Following the completion of the project, one of the most interesting results has been the reaction of auditors. For example, before the system was implemented, whenever an auditor came into the business and asked for traceability information, this would usually take several hours to produce.

"Now, when the auditors visit, we can produce traceability information in less than the time it takes to make a cup of tea! In fact, the first auditors that visited after the system went live were so shocked about how fast and completely we carried out the audit, that they didn't quite believe it. To reassure them, we had to take them through how the system works to retrieve the information. Seeing is believing, and they happily signed off the audit."



“Data-led traceability has been a hugely significant step forward for us as a business. **Pickstock**”

Simplify audits with QA data transparency

For food manufacturers, our Active Dashboards are a great way to visualise trends in non-conformances and conformances for QA purposes.

Driven by real-time data, the technology provides a living dashboard and alert mechanism, for any food manufacturing QA department. It can immediately highlight whenever a non-conformance has occurred, anywhere within the business, and wherever checks have been recorded (using SI's MES and shop-floor data capture).

For QA management, Active Dashboards can be set up with RAG (red, amber, green) status indicators. Using these RAG statuses, a non-conformance can be immediately flagged up in red, instantly highlight a problem (see Fig. 1).

QA dashboards also make audits far more straightforward to manage. They provide complete transparency of the business to the auditors, whenever they visit from food governing bodies or from your customers. Nothing is hidden from the auditors, as all



With Active Dashboards in place, QA managers can trust the system to provide information about any non-compliances throughout their business.

clearly visible. Moreover, wherever the system has recorded any alerts and non-conformances, auditors can access the finer detail by simply clicking on the alert to drill down.

[Request our Active Dashboards Guide](#)

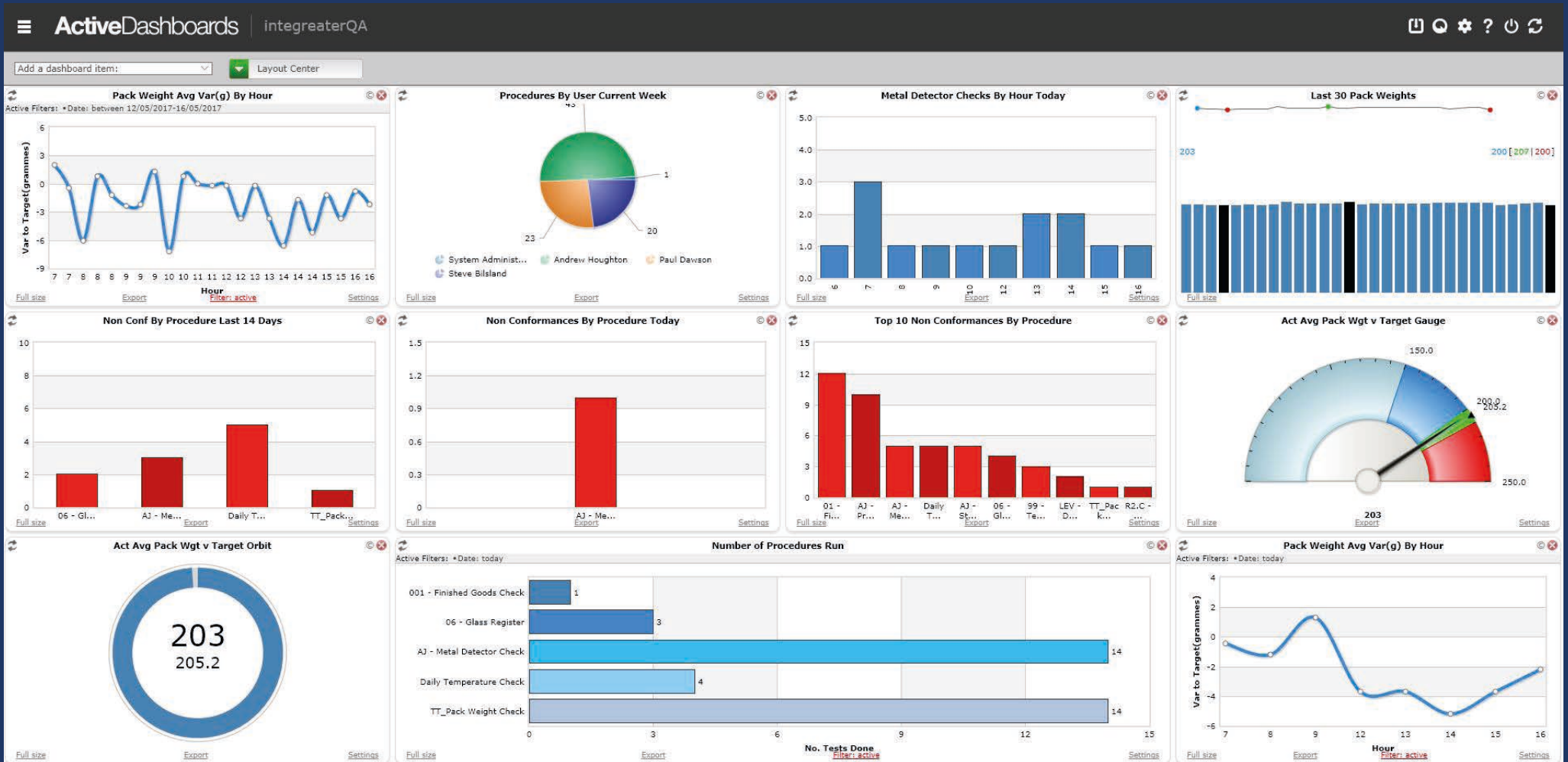


Fig. 1: example of a QA dashboard visualising data collected from checks performed on the factory floor (requires SI's QA module).

Case study: Paperless QA at Faccenda Foods eliminates 1.8 tonnes of paperwork each year

SI's paperless QA solution has delivered a step change in how technical process checks are managed at Faccenda Foods (now known as Avara Foods).

"As part of developing the solution with SI, we've used a number of different models from SI," explained David McCarthy, Production Systems Manager at Faccenda. "We're using SI's paperless QA system, together with their planning system to configure outer case marking and the weigh price labelling.

"In addition, all of our WIP (work in progress), on stock and all transactions recorded within SI's software, as well. It provides us with "one version of the truth" by monitoring production with real-time data capture and monitoring of production, both on the shop floor and in the offices".

"All our retail line checks are completed on wireless tablets in real time. The reports we generate clearly document any non-conformances that have

occurred during a shift, the actions taken, by whom, and how the issues have been signed off.

"One of the impact of our paperless QA programme has been the elimination of approximately 1.8 tonnes of paperwork, that was previously generated as a result of technical checks in the factory each year.

With comprehensive, automated reporting, Avara Foods is assured that its business is always audit ready.

If you'd like to find out more about how SI can help your food manufacturing business harness the power of digitalised QA and traceability please contact: info@sifoodsoftware.com

Alternatively, visit our website at www.sifoodsoftware.com and search and search "traceability" to find out more.



About the author

Rob Stephens has a background in engineering and founded SI in 1992 after working in the meat processing industry for a number of years.

In one of his first food industry roles he was tasked with evaluating a software system that was designed to support the transition of a supermarket from meat counters to retail pack. After discovering the software was a standard 'off the shelf' solution, that couldn't cope with the unique differences of the meat processing industry, Rob saw an opportunity to solve this problem.

He set about trying to change the software, working with the developers to make relevant changes, scoping these out and following the process to completion.

Rob: "I was frustrated that there wasn't a system that did what we needed. I insisted on process, timelines, testing and integration to make it work. But in the end, I saw the impact that work had on our overall performance, compared to other supermarket suppliers." Rob later licenced and then, after founding Systems Integration (SI) in 1992, bought the rights to the software.

"What was created out of frustration has since been developed from a great deal of passion and drive by a team of people that know the industry they serve. We have recruited expert talent from within the meat and wider food processing industry to help us develop, implement and build the business.

Today Rob leads a team working with some of the largest food processors in the UK & Ireland. SI solutions have also cross the water to food processors in Canada and the USA, with Rob continuing to push the boundaries with his philosophy of 'Getting it right and always making it work' which has been ingrained within SI culture for how it does business since the company was founded 27 years ago.



About SI

At SI (Systems Integration), everything we do is geared around helping our customers to run their perishable food businesses as efficiently as possible, whilst enabling them to fulfil their customer expectations.

Our customers rely on us to provide superior levels of control, throughout their businesses, delivering a real-time understanding of what's going on.

By working with us, and through use of our food ERP, supply chain planning and MES solutions, they can make informed, effective decisions and fine-tune their operations in real-time.

At SI, we know that a business relationship is based on mutual trust and understanding. We work alongside our customers to get under the skin of their operations and define

the very best solutions to fit with the way their businesses work. With our combination of unrivalled knowledge and our proven Integreater food processing set of modular software, specifically developed for the challenging food production environment, SI provides the obvious choice for companies seeking productivity improvements across their operations.

Whatever the challenge, we are driven by a common purpose, to ensure our customers are always satisfied.

We never give up; we always take ownership; we make our solutions work for you. Our drive, tenacity and commitment are the foundations of our longstanding customer relationships.

Proven solutions delivered by food processing specialists

Established in 1992 by our CEO, Rob Stephens, our team of food production and business experts has formed long-term partnerships with leading food manufacturers across the UK, the Republic of Ireland, USA and Canada.

If you work in a challenging food production environment and would like to discuss ways to improve efficiency, we're here to help. Simply visit our website to find out more or email info@sifoodsoftware.com.

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