



USTER® Fabric Inspection

The quality analysis systems

What is Think Quality™?

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It is 'managing your textile mill with quality in mind'

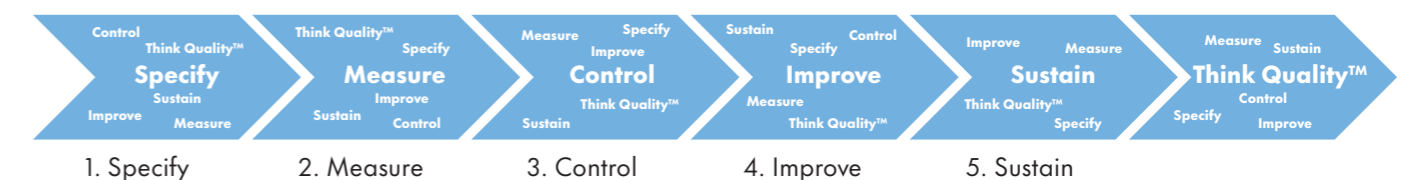
Today's textile markets are highly competitive, throughout the entire value chain from fiber to fabric. Customers expect unique products, at the right quality and free from unacceptable defects, every time. Fabric producers need to manufacture economically, with best-possible use of resources – especially raw materials and labor. These are major challenges, requiring comprehensive management strategies.

Take control of your quality – Think Quality

Uster's unique Think Quality approach is the way to 'manage your textile production with quality in mind'. It integrates world-class Uster products and services to ensure you always produce optimum quality, enhancing your reputation – as well as achieving predictable profits.

Think Quality means:

- Working to clear quality specifications from customers
- Controlling raw material sourcing, costs and yields
- Applying the best measurement and information systems
- Continuous production monitoring, for rapid response
- Understanding improvement options, through automated application know-how
- Improve yield and assure quality of the final product



Producing the right quality every time – the challenge for fabric producers

Uster Fabric Inspection delivers major benefits for fabric producers. The three automated solutions support quality assurance and optimization of fabric yield in the final product. Automated inspection technology means fabric producers depend less on human judgment and produce consistent, reliable quality.

Uster Q-Bar 2 provides early-stage detection of defects direct on the loom. Uster EVS Fabriq Vision automates the inspection and grading process for greige and finished fabrics. Uster EVS Fabriq Shade ensures color uniformity of fabrics. Uster Fabriq Assistant offers a reliable and tailored solution for processing, analyzing, and visualizing quality data, allowing decision-makers to concentrate on their core tasks.



USTER® Fabric Inspection: Business growth and quality assurance

Think Quality at the next level Solutions and services for fabric manufacturers

Producing the right quality every time – the challenge in the textile industry for fabric producers

Uster Fabric Inspection delivers major benefits for fabric producers.

The automated solutions support quality assurance and optimization of fabric yield in the final product. Automated inspection technology means fabric producers depend less on human judgment and produce consistent, reliable quality.

Uster provides inspection systems for all production stages:
from the fabric manufacturing process up to final inspection after finishing

- Uster Q-Bar 2
- Uster EVS Fabriq Vision
- Uster EVS Fabriq Shade

At every stage of textile production, it is essential to prevent defects as early as possible, as well as controlling the finished product. First quality production to customer specifications is the goal – especially important in demanding applications such as technical textiles and nonwovens. In apparel and home textiles it is vital to avoid seconds and minimize waste fabric. Using the right equipment, producers can also extend their flexibility by reacting to changing markets.



Imagine a textile mill and Uster working together to make a real impact on quality... Think about the possibility of investing flexibly in state-of-the-art Uster equipment – combined with intelligent digital tools that transform test results into practical decisions... And imagine Uster textile experts working with mill staff to achieve the right quality levels every time, at optimal cost!



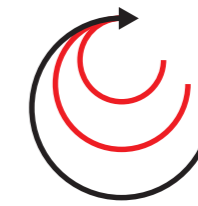
Cutting-edge hardware
Uster Fabric Inspection Systems

- Automatic real-time quality inspection
- Seamless integration in production lines at full operating speeds



Data-enabled software
Uster Fabriq Assistant

- One central data platform for quality information
- Automated data collection, visualization and analysis
- Automated data processing and reporting functions supported by Artificial Intelligence



Textile Expertise
Uster Adoption & Outcome Services

- Continuous collaboration for optimized business outcomes
- Advanced guidance by textile experts with deep domain know-how

USTER® Q-BAR 2

The formation monitoring system

The best way to avoid off-quality is simply not to make it. Uster Q-Bar 2 operates directly in the fabric formation area. Inspecting the fabric at this point reduces material losses and the need for manual inspection after production. This enables delivery of constant and reliable quality and helps fabric producers stay competitive in the market.

- Fast, early-stage detection to prevent material loss
- Attractive and functional design
- User-friendly visualization and classifying



Fast, early-stage detection to prevent material loss
Its inspection position in the fabric formation area allows the Uster Q-Bar 2 to respond quickly when a defect appears and avoid long-running or repeating defects. The alarm and stop signals enable the operator to correct problems immediately. This early detection reduces second quality and material loss.

The system design allows for simple integration on existing weaving machines. For specified machine types, an interface for communication with the loom is available.



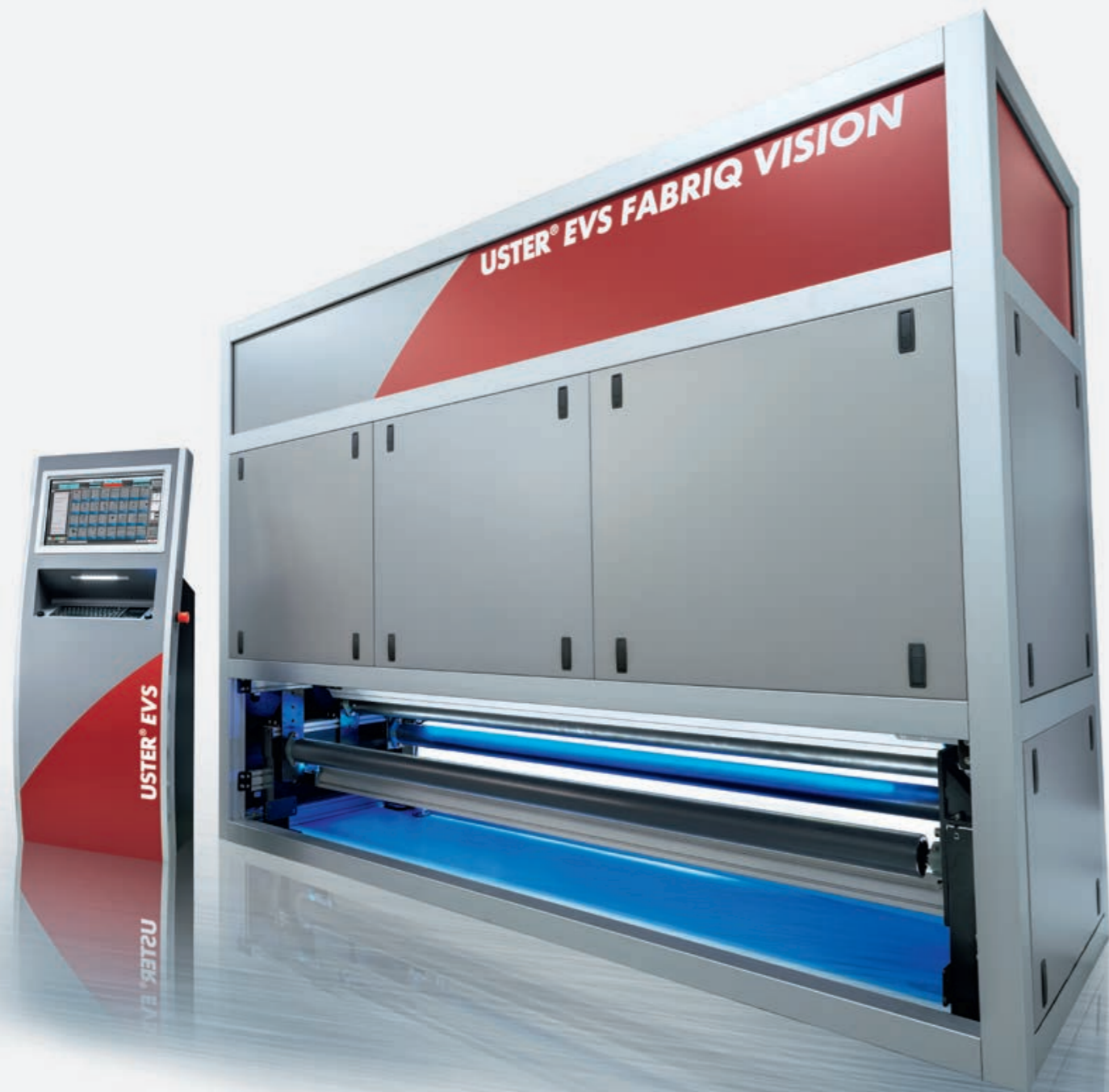
Attractive and functional design
The slim and light housing enables the operator to work on the weaving machine without hindrance. The front can be opened, for easy access to the hardware for maintenance. Integrated LEDs in the side cap of the Uster Q-Bar 2 indicate system status. The operator is guided to the exact position of a defect by a red light on the Q-Bar 2, which is visible at both front and back. The system contains no moving parts. Which reduces costs for spare parts and maintenance effort.



User-friendly visualization and classifying
The system displays the fault image and position in front of the operator, in real time via the user interface. Defects are detected, categorized, saved and displayed on an intuitive touchscreen. A quality defect map is created for each roll and this can be reviewed in the additional album software. Uster Q-Bar 2 offers different classification and grading possibilities and allows rolls to be categorized according to number, size and position of defects, as well as customer criteria, reducing the demand for manual post-weaving inspection.

USTER® EVS FABRIQ VISION

The fabric quality assurance system



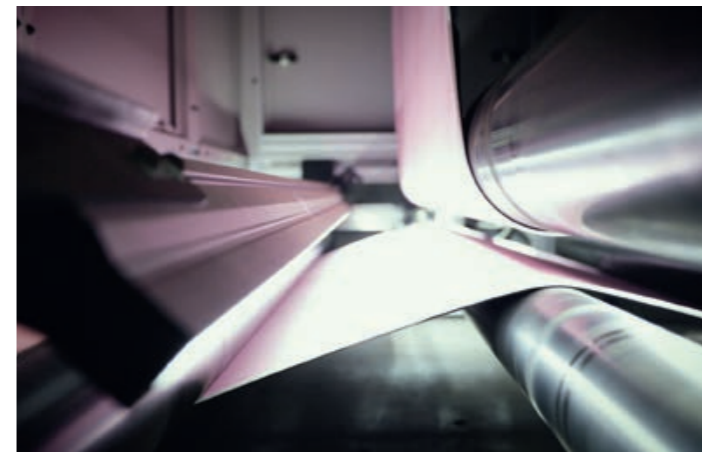
Fabric producers need to guarantee reliable quality. This requires a consistently high rate of defect detection. Uster EVS Fabriq Vision ensures this is achieved by using automated control during intermediate and final inspection, removing the need for costly manual inspection. The system's ability to capture any visible defects allows fabric yield to be optimized and prevents claims.

- Reliable performance in challenging environments
- Enhanced detection capabilities
- Real-time process monitoring and quality inspection



Reliable performance in challenging environments
Uster EVS Fabriq Vision provides robust hardware to operate in the most challenging textile environments. All components are built to last and perform under real textile industry conditions.

Self-diagnostic tools help to monitor the system state and trigger alarms for quick reaction times.



Enhanced detection capabilities
Detecting irregularities and defects on textile surfaces is a very challenging task, and one which should not be left to a human machine operator. Automated fabric inspection with the technology of Uster EVS Fabriq Vision will enhance the reliability of defect detection and free up resources for the machine operator to focus on other duties.

Various detection angles, state-of-the-art camera technology and sophisticated illumination will make defects visible and increase the detection performance to a maximum.



Real-time process monitoring and quality inspection
Uster EVS Fabriq Vision provides real-time alerts for operatives, showing all defects and automatically creating roll inspection charts. All detected faults are collected in a dataset and transferred to Uster Fabriq Assistant. Here the operator can quickly mark faults and select which can be deleted. Users can set their own quality standards for different types of fabric and increase the efficiency of the inspection process.

USTER® EVS FABRIQ VISION N

For seamless integration into production

If space is limited, or the process does not allow a frame with rollers to be installed – for example in nonwovens or tire cord production – Uster EVS Fabriq Vision N is the solution.

- Seamless integration in space-critical processes
- Protection of sensitive fabrics
- Real-time process monitoring and quality inspection



Seamless integration in space-critical processes
With its minimal space requirements, Uster EVS Fabriq Vision N can be integrated into existing production lines by fabric and nonwoven manufacturers, without compromising on performance.

Using Uster's Smart Vision Cameras, customers will benefit from highly reliable and precise defect detection, enhanced by the various illumination types that can be applied.



Protection of sensitive fabrics
For sensitive fabrics, each additional re-rolling process carries the risk of damaging the fabric, and therefore must be avoided. By integrating Uster EVS Fabriq Vision N into the production line, there is no need for an additional rolling process which would risk damaging the fabric. Integration into a tire cord dipping line is an excellent example, enabling the producer to avoid post-production inspection and react to running problems immediately.



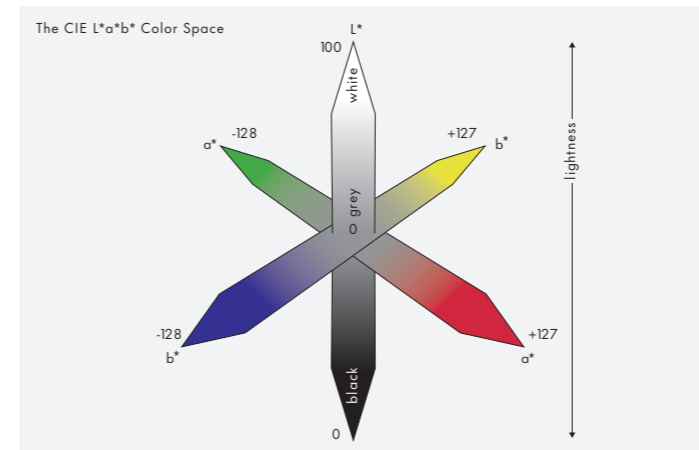
Real-time process monitoring and quality inspection
With Uster EVS Fabriq Vision N, production lines are continuously monitored, providing real-time insights into the quality of the product. This enables proactive measures to minimize waste, reduce downtime and optimize production efficiency.

USTER® EVS FABRIQ SHADE

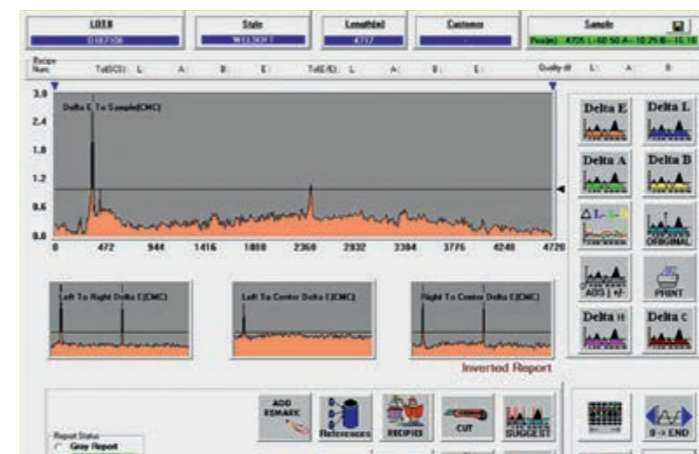
The fabric shade optimization system

With dyed fabrics, the main challenge is color consistency from beginning to end and from side to side of a roll – as well as between rolls of the same lot. Uster EVS Fabriq Shade provides standard shade measurements with high accuracy. It supports fabric producers to deliver a constant shade in end-products, preventing claims and keeping customers satisfied.

- Elimination of manual shade sampling
- Yield optimized based on customer requirements
- Combined solution for maximum efficiency



Elimination of manual shade sampling
Uster EVS Fabriq Shade combines the power of a traversing spectrophotometer with sophisticated information processing. Monitoring is done directly in production, without the need to cut the fabric. This reduces cost and effort for sampling.



Yield optimized based on customer requirements
The system continuously qualifies shade variation, based on a set reference point, and includes an automatic planning and sorting feature. Uster EVS Fabriq Shade offers several sorting options, which can be displayed on the monitor. To ensure that lots have optimal color uniformity, the system offers grouping options according to shade. This allows fabric producers to optimize fabric yield and meet the requirements of major retailers.

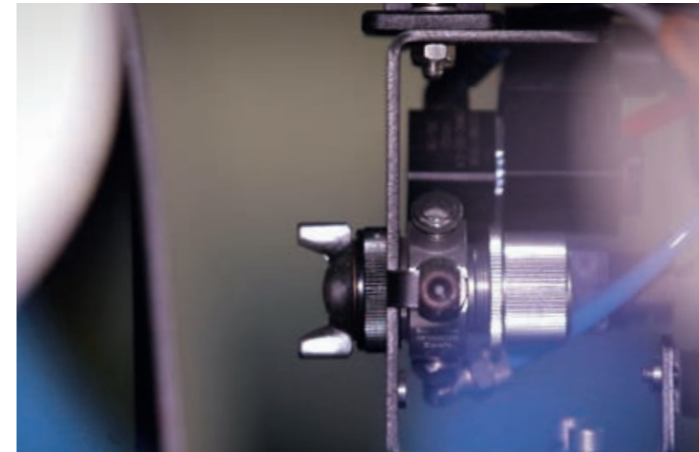


Combined solution for maximum efficiency
By combining Uster EVS Fabriq Vision and Uster EVS Fabriq Shade in one process step, the efficiency of fabric inspection will be greatly increased. Additional space requirements and process steps can be avoided, and all relevant quality data will be provided in one operation.

Optimized Cut Control (OCC) Increased fabric yield after inspection

After final inspection, fabric will often be cut into smaller rolls, which will then be delivered to various customers. The OCC system provides a software tool for automated cut optimization, as well as additional components which can be installed on any existing debatching or cutting line. With these components, process efficiency can be increased.

- Upgraded process efficiency
- Maximized fabric yield
- Easy operation



Upgraded process efficiency

The cut optimization software automatically identifies the correct cutting position to achieve maximum fabric yield according to quality requirements. This makes the cutting process highly efficient. Invisible synchronization marks indicate the position of defects and cut positions in a roll, so these are always under control, allowing the cutting table to run at maximum possible speed.



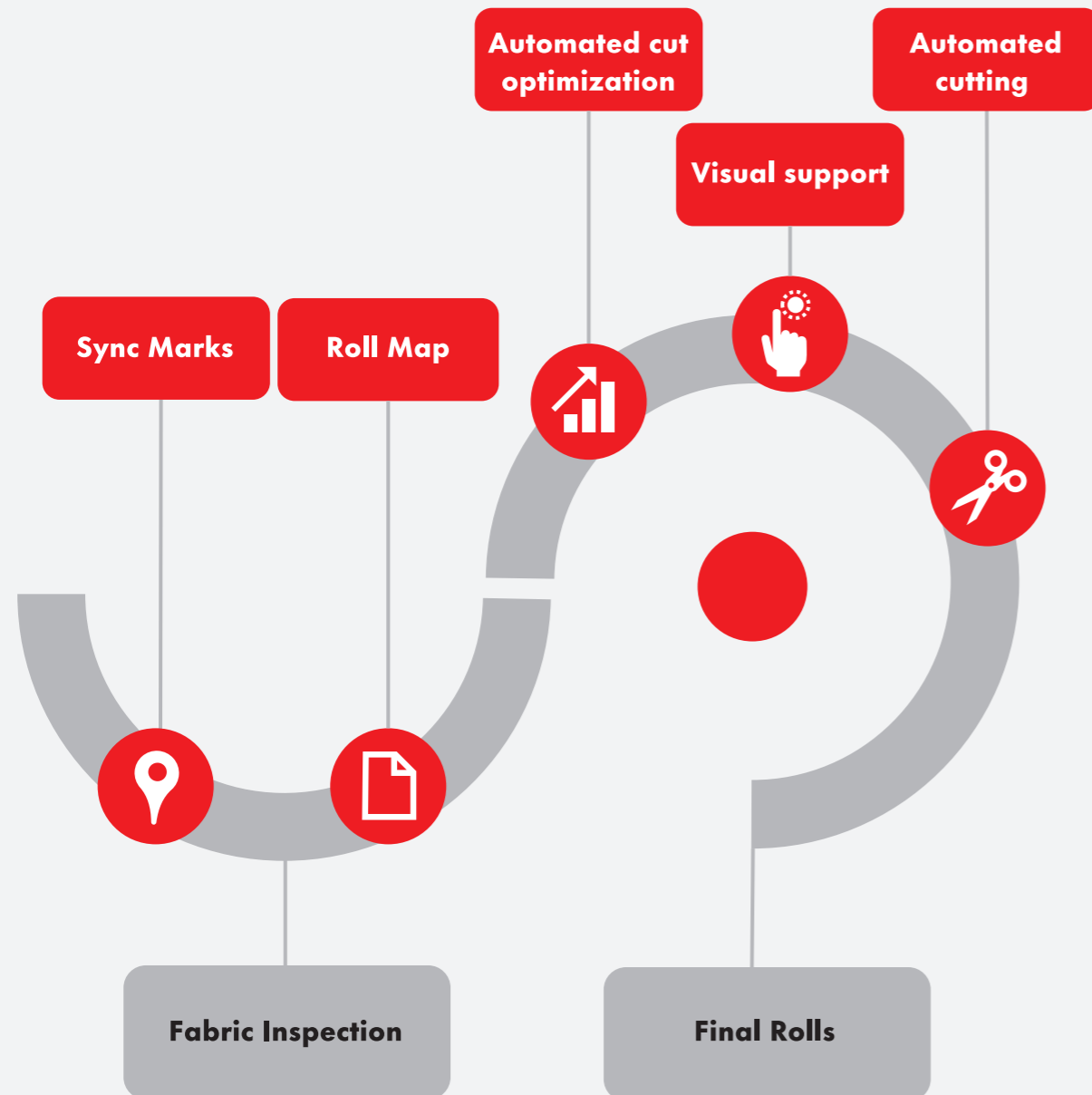
Maximized fabric yield

The cut optimization software calculates the optimum cutting position according to the quality requirements of the end-customers. By adding individual cutting rules, it is possible to meet different specifications and achieve the maximum possible fabric yield.



Easy operation

All cutting tables can be extended with a laser pointer, which supports operators to find defect positions quickly and securely, when mending or marking is required. In addition to the defect map on the screen, these visualization tools help operators to work smoothly and efficiently.



USTER® FABRIQ ASSISTANT

The central fabric quality platform

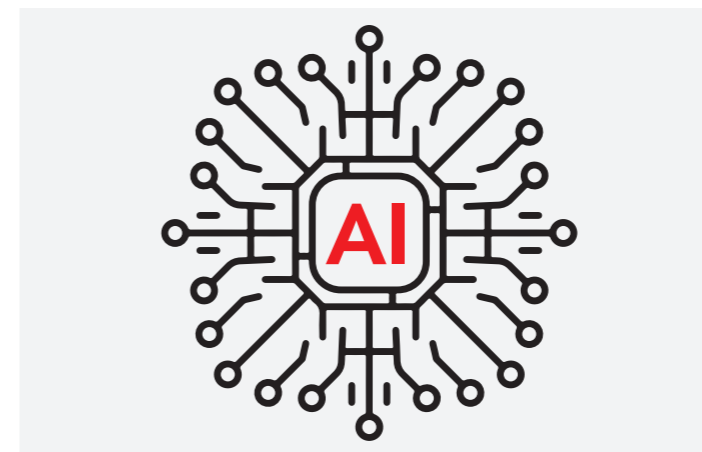
With its automated features, this Uster Fabriq Assistant acts as a virtual assistant, assisting any data stakeholder in their daily work, enabling them to be more efficient and productive. It offers a reliable and tailored solution for processing, analyzing, and visualizing quality data, allowing decision-makers to concentrate on their core tasks.

- Maximized efficiency with automated data analysis
- Increased process safety by consistent quality decisions
- Highly flexible and customizable application



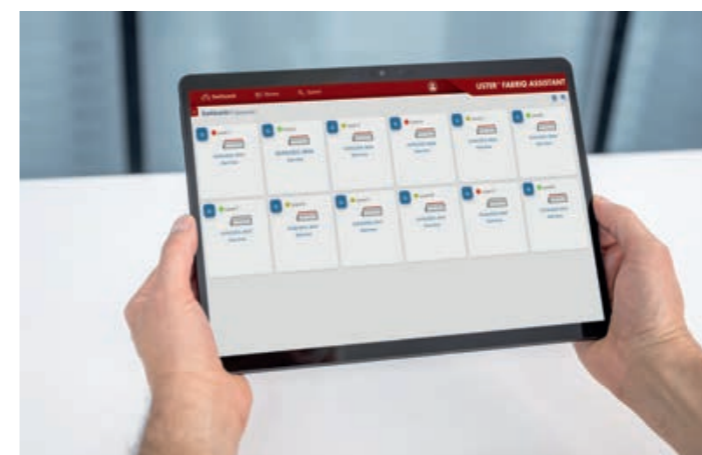
Quality reporting

The value module will enable managers and engineers to take impactful decisions and achieve operational excellence with fully automated quality data analysis.



AI Classification

Maximizes decision-making accuracy with Artificial Intelligence, providing consistent and efficient defect classification.



Central Management

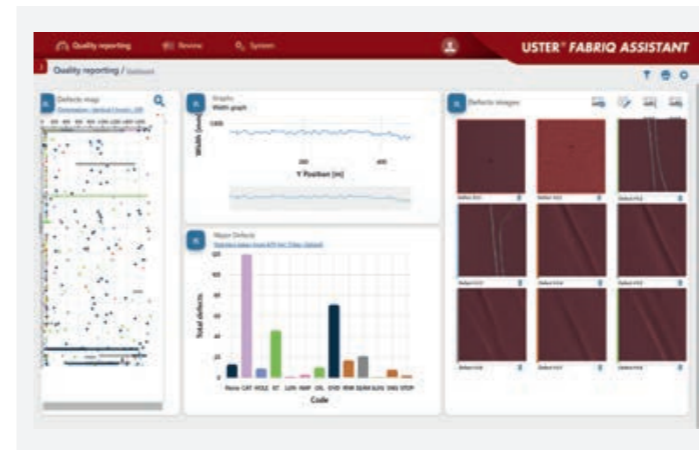
Stay informed and make timely decisions with real-time monitoring and remote access to quality information.

USTER® FABRIQ ASSISTANT

Quality Reporting: operational excellence through quality data

Uster Fabriq Assistant will enable quality managers and process engineers to make impactful decisions based on their quality data. The key challenges of continuously improving quality and achieving operational excellence are delivered through Uster Fabriq Assistant with Quality Reporting.

- Intuitive quality understanding
- Efficient data processing
- Flexible data analytics



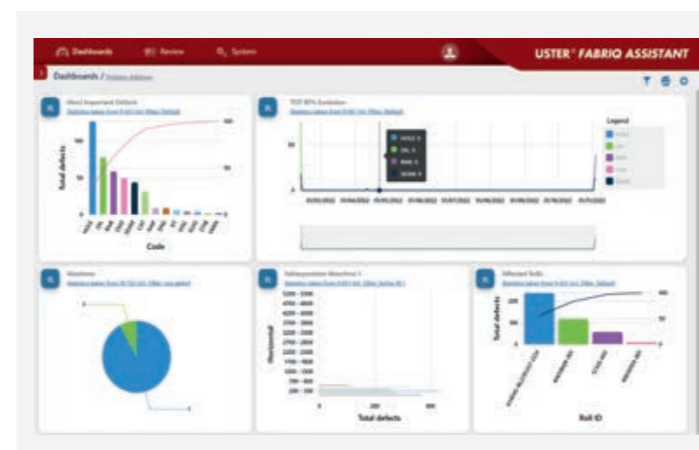
Intuitive quality understanding

Quality Reporting offers a range of features enabling clear and straightforward data visualization and statistics – whether for a single roll or for all available data. Flexible filtering and data aggregation options allow users to efficiently highlight relevant information, while removing any unnecessary data, to gain valuable insights quickly and efficiently.



Efficient data processing

The Quality Reporting module offers fully-automated data processing and analysis that makes traditional statistics software obsolete. Manual data processing becomes a thing of the past, and the quality status information is automatically updated to ensure up-to-date results.



Flexible data analytics

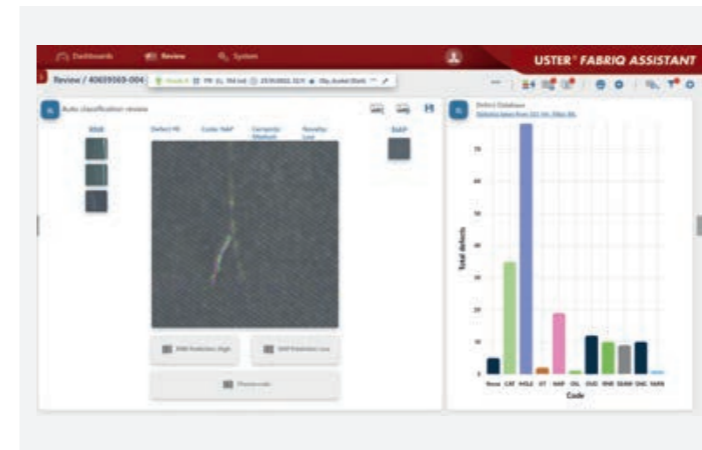
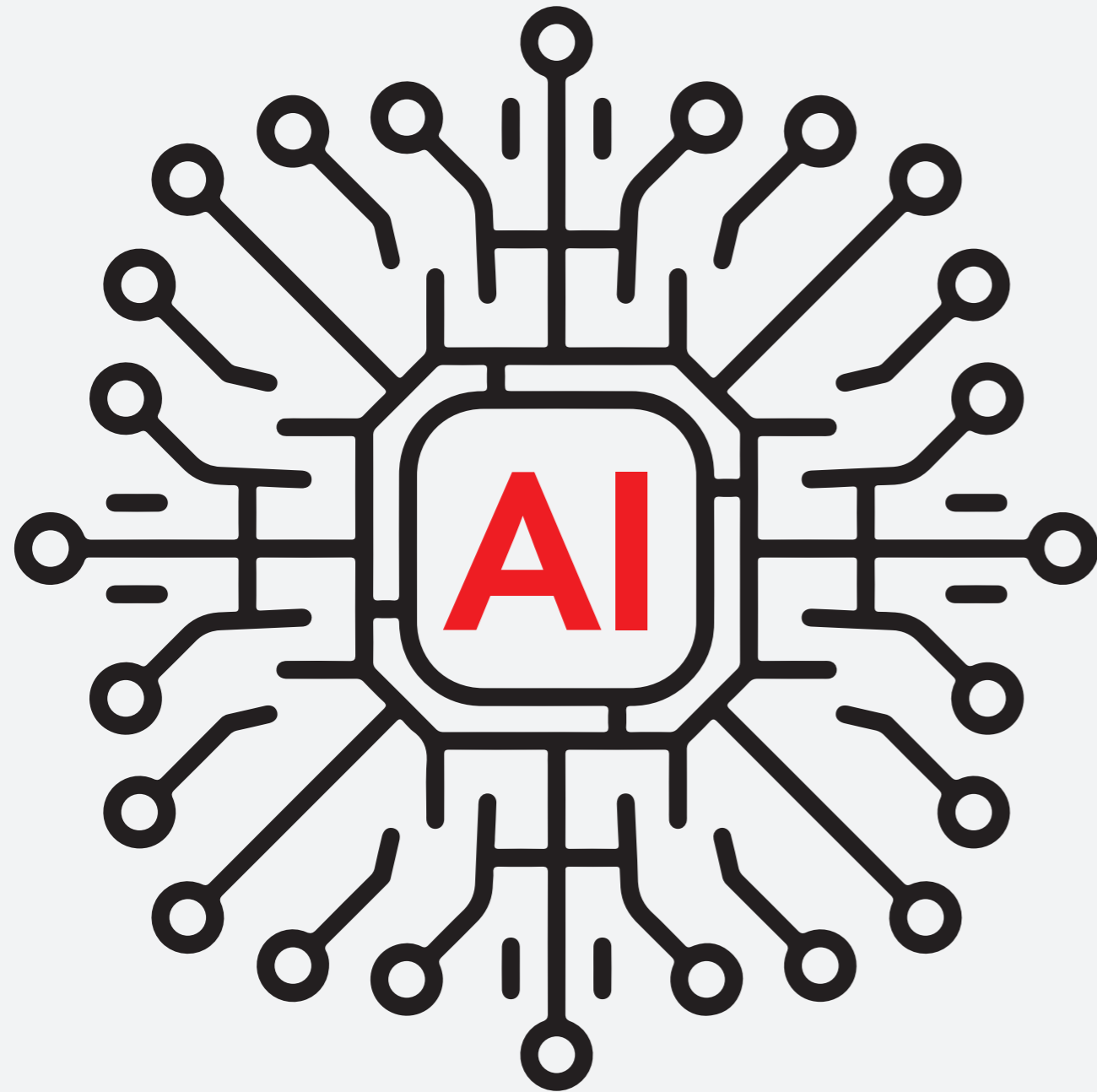
The Quality Reporting module is designed to adapt to a user's individual preferences and working style. During development, flexibility was already built into the system to ensure that it can accommodate the unique needs of any user. The Quality Reporting module offers a range of data visualization and presentation options, and the dashboards can be easily adapted with responsive design for maximum usability.

USTER® FABRIQ ASSISTANT

AI Classification – consistent quality decisions

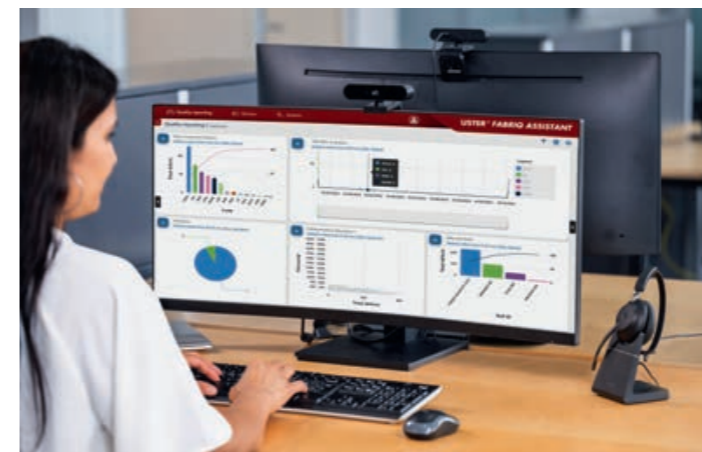
If decisions depend on data, the main requirement is that the data must be meaningful and consistent. AI Classification will assist fabric producers in classifying defects with their corresponding defect code. The classification task will be done automatically within in a few minutes, always applying the same rules and independent of any human capabilities.

- Data consistency
- Detailed understanding
- High processing performance



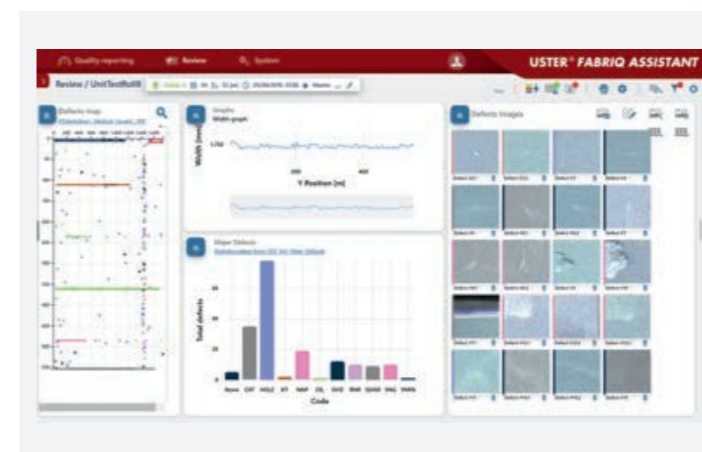
Data consistency

AI Classification is designed to provide reliable and consistent classification results. This means that users can have confidence in the accuracy and consistency of their data. By eliminating the risk of variation in the quality of decisions, managers can make informed choices and rely on their data with assurance.



Detailed understanding

Uster fabric inspection systems excel at identifying quality issues, but accurately interpreting the results is equally important. It means users can gain a comprehensive and complete understanding of their product's quality, leaving no blind spots. This allows for informed decision-making, optimizing production processes, and improving overall product quality.



High processing performance

AI Classification aims to minimize the time required for manual data review. However, efficiency is not the sole determinant of success. Equally important are high safety standards and consistent accuracy in performance. The AI Classification module offers additional safety mechanisms to ensure that no crucial information is missed, along with advanced machine learning technology for optimal performance.

USTER® FABRIQ ASSISTANT

Central Management for real-time remote quality information

The Central Management module allows for real-time monitoring of connected fabric inspection systems, enabling remote access to current product and process quality information. This feature empowers managers and process engineers to stay informed and make timely decisions, regardless of their location.

- Quick time-to-action
- Increased accessibility
- Enhanced efficiency



Quick time-to-action

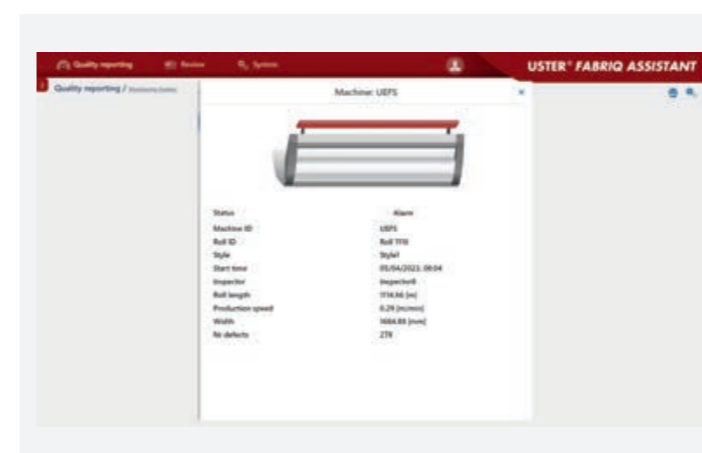
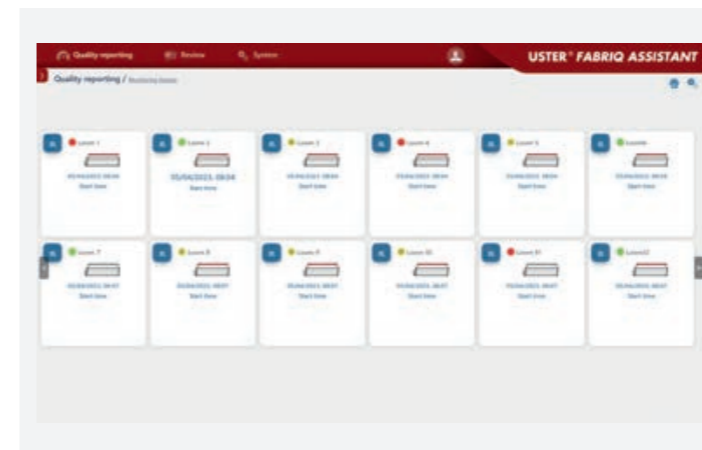
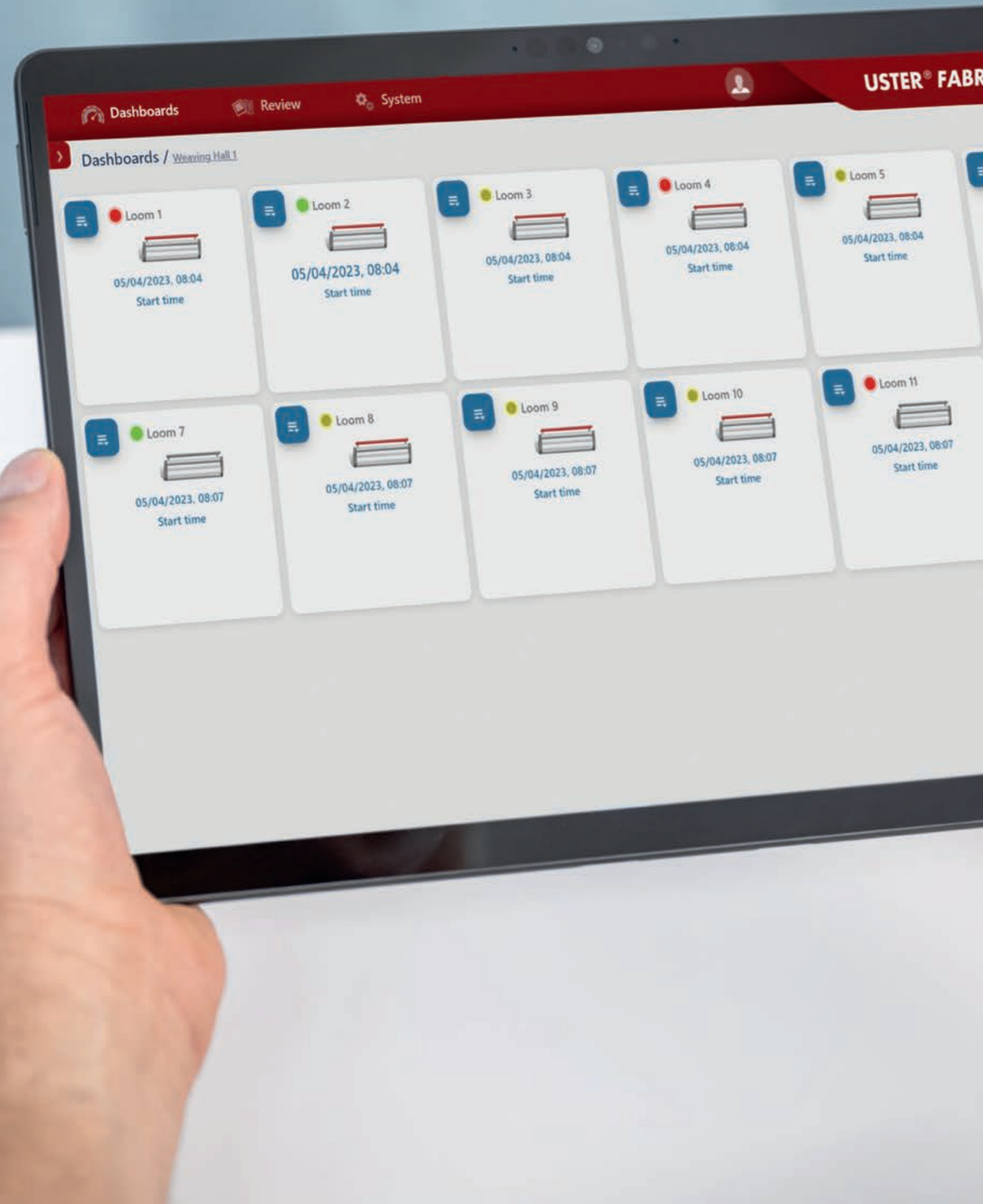
When issues arise, quick response is critical to avoid further damage to the machine, or second quality production. Central Management offers continuous, real-time production and process monitoring. It provides insights into machine status, such as the number of detected defects, and any alarms or warnings. With this information, prompt action can be taken to prevent any negative impacts on the production process.

Increased accessibility

The Central Management module allows managers to free up time and resources for other tasks in their busy schedule. With this feature, they can stay in touch with product and process quality, make informed decisions, and manage their workload more efficiently.

Enhanced efficiency

With real-time monitoring capabilities and access to relevant context information, issues can be identified and addressed promptly, preventing delays. This results in a more streamlined production process, allowing managers and process engineers to focus on other tasks while maintaining high quality standards.



The standard from fiber to fabric

Uster is the world's leading supplier of total quality solutions from fiber to fabric. Uster standards and precise measurement provide unparalleled advantages for producing best quality at minimum cost.

Think Quality

Our commitment to state-of-the-art technology ensures the comfort and feel of the finished product – satisfying the demands of a sophisticated market. We help our customers to benefit from our applied knowledge and experience – to think quality, think Uster.

Broad range of products

Uster occupies a unique position in the textile industry. With our broad range of products, we have a wide reach across the textile chain that is unmatched by any other supplier in the market.

Optimal service

Know-how transfer and instant help – we are where our customers are. A total of 215 certified service engineers worldwide grants fast and reliable technical support. Benefit from local know-how transfer in your specific markets and enjoy our service à la carte.

Uster Statistics – the textile industry standards

We set the standards for quality control in the global textile industry. With Uster Statistics, we provide the benchmarks that are the basis for the trading of textile products at assured levels of quality across global markets.

Usterized – brand your products with quality

Usterized stands for 'defined quality assured' within the textile chain. We invite selected customers to join the Usterized Member Program. More information at www.usterized.com.

Uster worldwide

With four technology centers, four regional service centers and 50 representative offices around the world, Uster is always sure of delivering only the best to its customers. Uster – committed to excellence, committed to quality. And that will never change.



Uster Technologies AG

Sonnenbergstrasse 10
8610 Uster
Switzerland
T. +41 43 366 36 36
F. +41 43 366 36 37
sales@uster.com
www.uster.com