Industrial

Industrial Weighing

News

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Productivity in Production
Technology Enhances Automation

The need to improve process efficiency in production is constant. Interconnectivity and direct communication using weighing and inspection equipment with built-in diagnostics delivers real benefits for manufacturers while keeping pace with Industry 4.0 developments.

The terms "Industry 4.0" and the "Internet of Things" (IoT) are becoming commonplace as more facilities become "smart factories". These terms are at the core of increased automation and process improvement for many industries.

Increasing pressure
Manufacturers are finding themselves under increasing pressure to react quickly to fulfill customer requirements. This leads to the need to improve production efficiency and heightens expectations of weighing and

inspection technology to deliver solutions that streamline processes, increase automation and provide visibility through real-time data.

Automated advanced warnings
In traditional manual operations, data is frequently captured, documented and distributed with varying degrees of human intervention. For example, maintenance teams may monitor key parameters of pieces of equipment and log performance manually. But that doesn't necessarily avoid

METTLER TOLEDO

1 Truck and rail scales

2 Bench and floor scales
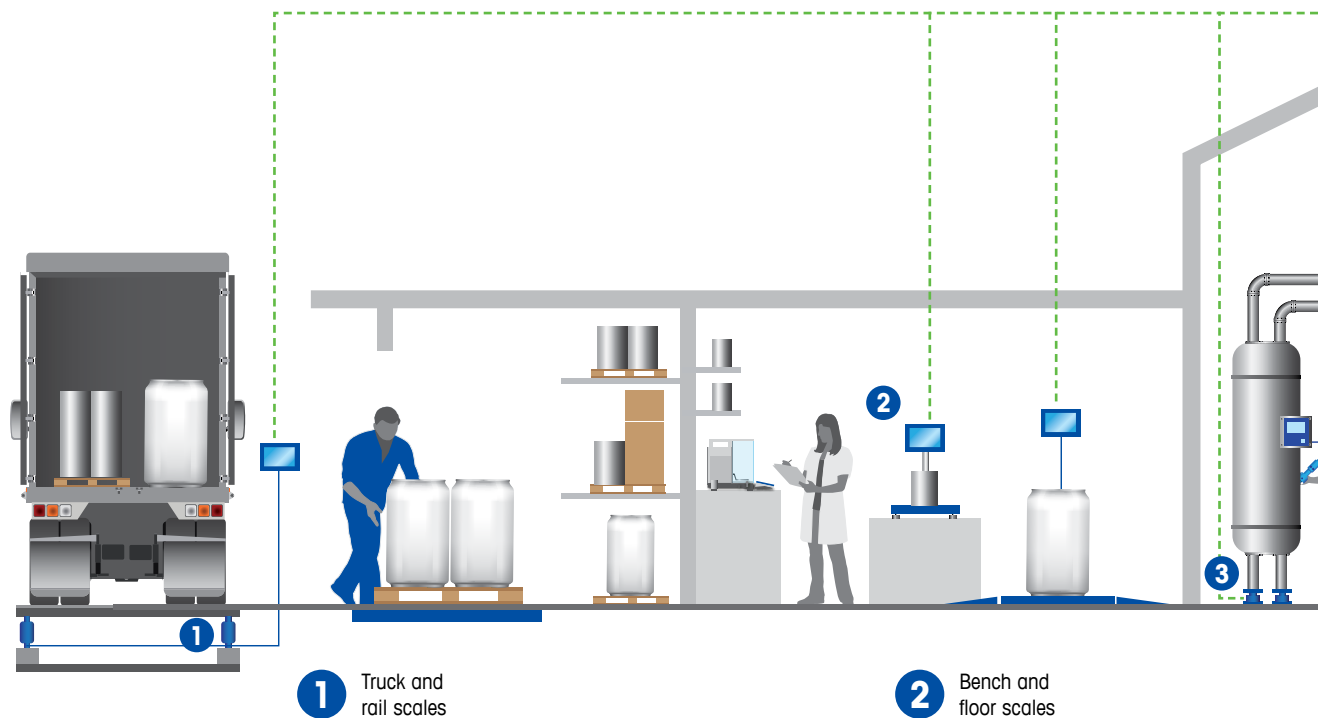
a complete line stoppage that may occur in the event of an unmonitored trend that is allowed to drift outside of acceptable tolerances. Built-in diagnostics can avoid such events, providing advanced warning of potential line stoppage before it actually occurs. This is just one example of how integrated diagnostics can improve day-to-day processes and contribute to improvements in Overall Equipment Efficiency (OEE).

Automation is the key
Modern weighing and inspection equipment monitors performance, collects critical packaging line data, provides live analysis and enables decision-making for increased automation, improved efficiency and higher productivity.

Integrated diagnostics for early trend control
Many weighing and inspection devices are able to provide automated and real-time control from within the equipment. For instance, a metal detector is able to continuously monitor critical parameters, which allows for less frequent testing. If adverse trends are detected at any point, the system can provide an early warning, enabling adjustment to take place to rectify the issue before productivity is impacted via a system failure.

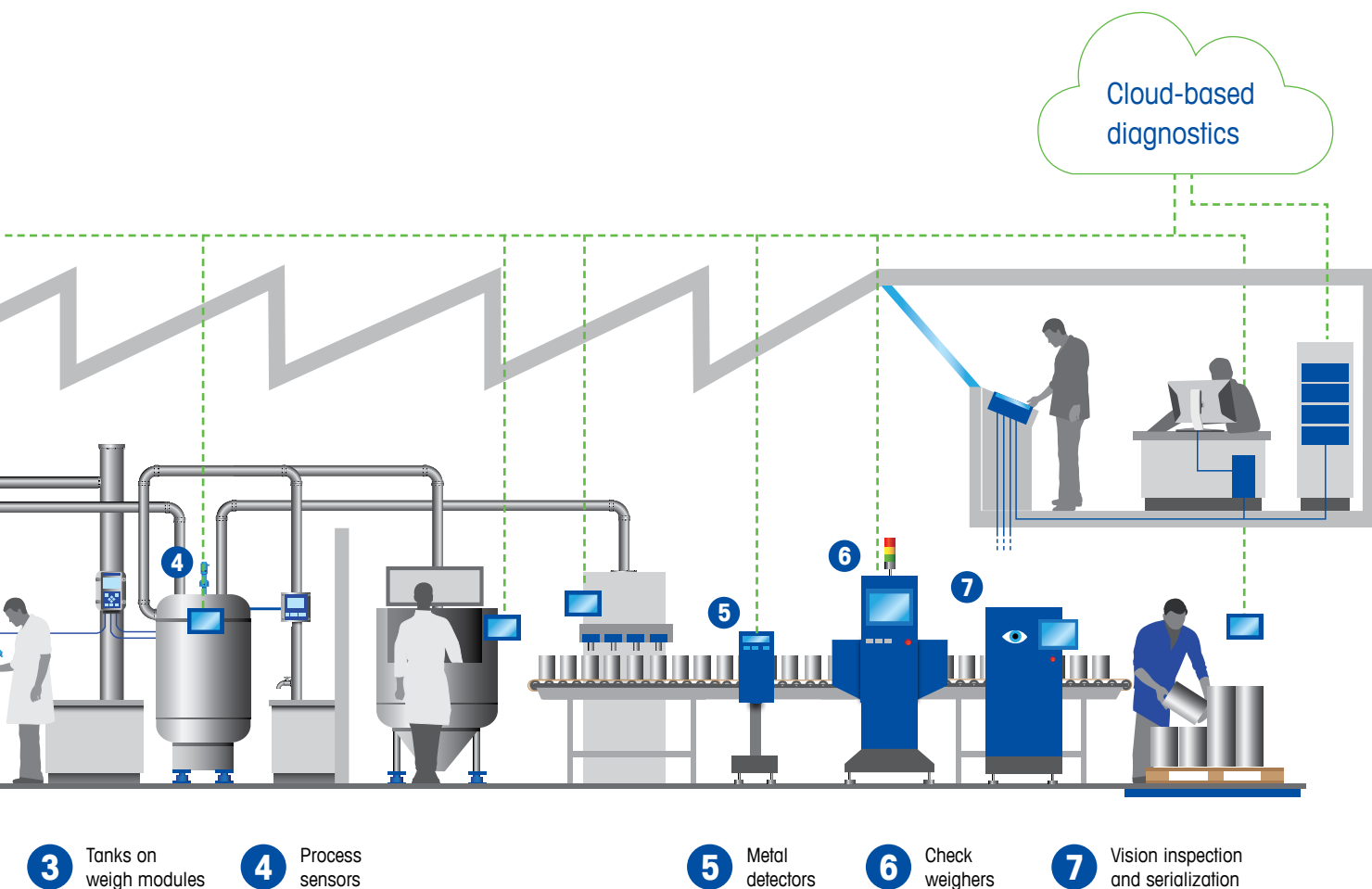**Predictive maintenance with intelligent load cells**
Additionally, state-of-the-art weighing technology for automation is based on intelligent load cells with integrated microprocessors for sig-

nal processing directly at the actual "working point". This eliminates data transmission errors and improves measurement result accuracy and consistency.

The intelligence in the load cell also allows continuous analysis of the weighing process. This means a failure or even gradual loss of performance can be identified and reported. In contrast, load cells with analog value transmission provide, at best, a general fault message, with no reliable way to diagnose a gradual performance decline of a load cell.

Automated fill control
Dynamic checkweighers can add further diagnostic capabilities by monitoring the weight of each pack-

Cloud-based diagnostics

3 Tanks on weigh modules	**4** Process sensors	**5** Metal detectors	**6** Check weighers	**7** Vision inspection and serialization	

age and initiating the automatic adjustment of filling systems to optimize target weights and reduce product giveaway.

External software support
Industry 4.0 can also be supported through the use of external proprietary software packages. Such advanced software solutions are now able to streamline and automate processes. For example, our ProdX software removes the need for mundane manual data-collection processes through the automated harvesting of data from product inspection devices. Additionally, our Collect+ software brings a new perspective to manual processes by displaying key performance indicators from manual portioning and various checkweighing activities.

Continuous improvement
The ability to collect such detailed information, along with advanced built-in diagnostics software, enables a new and improved approach to process control and optimization – a prerequisite for the Industry 4.0 age. Intelligent sensors pave the way for reduced downtime, faster troubleshooting and less waste product, leading to overall improvements in quality, automation and productivity.

▶ **www.mt.com/ind-4-0-in**

## Intelligent Process Sensors for Industry 4.0 and IoT
The current industrial revolution demands smarter machines. We offer sensors for the food, pharmaceutical or chemical industry including weight, pH, CO_2 and O_2. Download Sensors for Process Automation to learn how we can help you design highly competitive and intelligent process equipment.

▶ **www.mt.com/ind-sensors-for-automation-in**

How Fast Can You React to Consumer Trends?
3 Ways to Increase Flexibility in Production

Frequent product changeovers have a significant impact on productivity and require equipment that can be adapted easily. Mobile and cable-free weighing solutions offer maximum flexibility and minimize time-consuming adjustments. See three ways these solutions increase your flexibility to save time and enhance margins.
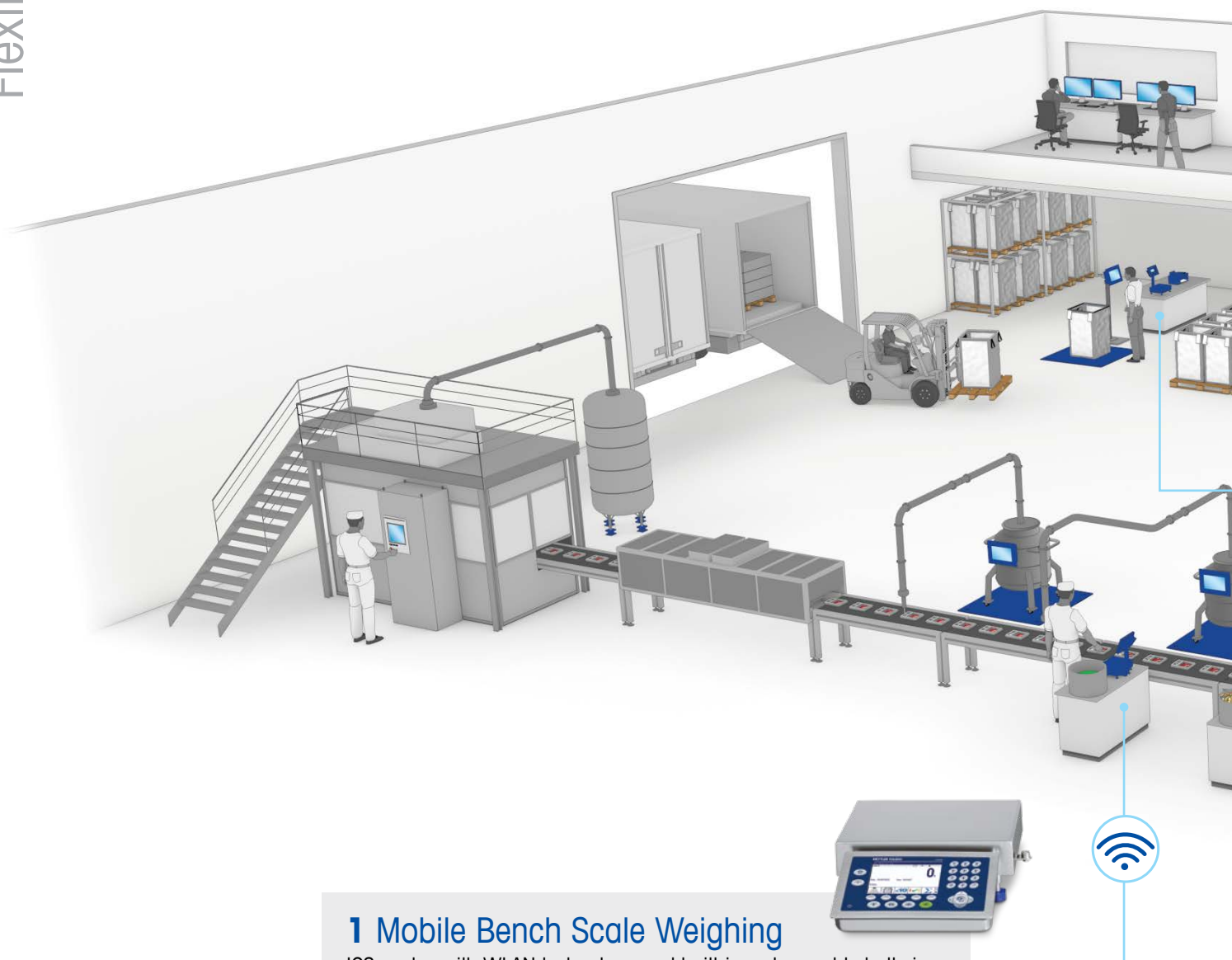
1 Mobile Bench Scale Weighing

ICS scales with WLAN technology and built-in rechargeable batteries can be placed exactly where they are needed at any time. They also offer convenient data transfer for external data storage or updates.

▶ **www.mt.com/ics-scales**

2 Wireless Floor Scale Weighing

The new Cable-Free Floor Scale offers unmatched flexibility, allowing it to be placed exactly where it fits best in your process. The scale offers an extended battery life of two years and it communicates with terminals wirelessly.
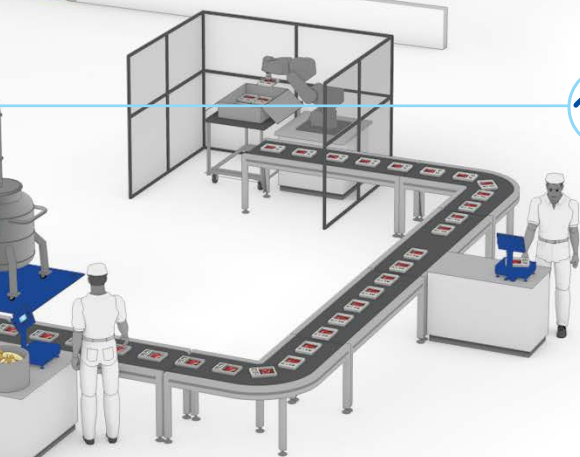
▶ **www.mt.com/ind-cable-free-floor-scale**

3 Flexible Label Printing

The ACM360 Bluetooth adaptor is designed to provide an undisturbed data connection between terminals and printers. It lets you print labels wirelessly from any production area for maximum flexibility.
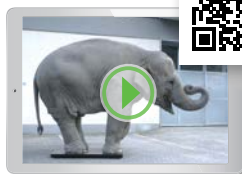
▶ **www.mt.com/ACM360-m1**

Why elephants prefer cable-free
No matter where your weighing needs take you, our Cable-Free Floor Scale offers the flexibility you need.
www.mt.com/ind-cable-free-floor-scale

Zero-Error Picking and Packing
New Solution for Manual Processes

Manual picking processes are prone to errors. Missing small parts and the inability to detect failures make these processes a constant source of quality issues. Avoid extensive rework, additional costs and customer complaints with new, scale-assisted Pick and Pack.

▶ **www.mt.com/ind-pickandpack**

Conveniently edit picklist

Create, edit and distribute your picklist or order to all available scales on the shop floor. The convenient Data+ tool allows fast and error-free data entry on a PC.
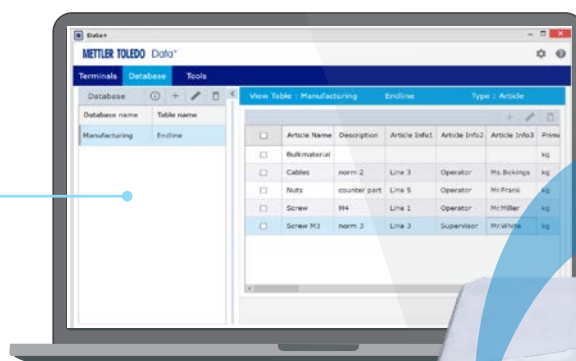
Print labels

Create labels and data entries or retrieve weighing data for traceability and customer audits. Display the complete picklist, quantities, operator and much more information on a printout.

Small parts and mixed items

Pick small parts like screws, bolts and washers in different quantities and with different sizes, shapes and weight into one container error-free. Add pre-packed kits or components and work with different container and package sizes.

Pick from any box

Pick parts, components or manuals with this solution. Pick from a single workplace or from different warehouse locations. Change picking orders and quantity easily. This mobile solution lets you pick parts in any combination.

Step-by-step guidance and prompting

Operators are guided through the picking process. This can be shelf locations, handling instructions or packaging material information. Benefit from achieving zero errors, since the application can only continue if the right part and amount is picked.

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Boost your pick process: SpeedWeigh™
Speed up picking processes by up to 50 percent with Anticipation Mode. This feature ensures the optimal readability is used during each step.
www.mt.com/ICS685
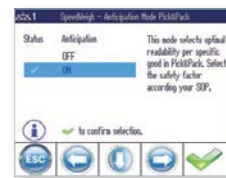
Improve Efficiency in Hazardous Areas
Versatile and Safe Bench Scales

Workflows in classified hazardous areas have to be safe and compliant, as well as meet differing functionality needs. BBA256x, ICS426x and ICS466x scales are designed to operate safely where explosive gases or dusts are present, meeting hazardous-area regulations, such as ATEX, FM, IECEx for Zone 1/21 with performance in mind.

Economical Out-of-the-Box Solution

BBA256x Scales
Pre-configuration of the BBA256x and our internal power supply makes field installation easy and fast. In addition, it is durable and easy to clean contributing to increased uptime and cost savings.

▶ **www.mt.com/BBA256x**

Precise and Ergonomic Solution

ICS426x Scales

The many different mounting options of the ICS426x and its compact design allow flexibility in optimizing your workflows. An intuitive user interface ensures quick and secure handling of simple weighing and manual filling operations with the highest precision.

▶ **www.mt.com/ICS426x**

Precise and Versatile Solution

ICS466x Scales

ICS466x scales offer versatile and highly functional interfaces for basic weighing, over/under checkweighing and filling applications with the highest precision. Communication options allow for easy integration into existing production processes.

▶ **www.mt.com/ICS466x**

Equipment marking poster
Easily identify markings and protection methods for equipment in hazardous areas.

www.mt.com/ind-haz-poster

5 Common Production Pains
How Our Floor Scales Can Help

Keeping an industrial production process running smoothly can cause headaches along the way. The latest additions to our floor scale family can help relieve some of the most common pain points while ensuring you maintain the required accuracy and versatility of your weighing process.

Safety and Accuracy in Ex Areas

① EX

Hazardous-area approved floor scales
Manufacturing in hazardous zones requires the highest levels of precision. Our floor scales are approved according to all international and many local hazardous-area standards while offering the same functionality as safe-area models.

▶ **www.mt.com/PFK9**

Inefficient Workflows and Tripping Risks

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Cable-Free Floor Scale
The number one reason for worker injuries in production plants is tripping. Our new Cable-Free Floor Scale solves this problem and offers new freedom in configuring production floor layouts that maximize efficiency and reduce costs.

▶ **www.mt.com/ind-cable-free-floor-scale**

Protecting Equipment Against Corrosion

(5)

Corrosion-resistant floor scales

Many chemicals exacerbate the potential for corrosion that can degrade equipment or compromise its function. METTLER TOLEDO floor scales meet the highest standards of corrosion protection and durability.

▶ **www.mt.com/PFA779lift**

Fitting Equipment on the Production Floor

(4)

Versatile floor scales

Space is tight on manufacturing floors and shifting layouts or room repurposing can require compromises. Our array of reliable, precise and robust floor scales can be tailored to your production needs of today while providing flexibility for the future.

▶ **www.mt.com/floor_scales**

Unreported Malfunctions Causing Batch Rework

(3)

PowerDeck floor scale

Traditional floor scales tend to be less accurate, and damage or user errors can be difficult to detect. PowerDeck's diagnostic features, user guidance and robust construction help operators to avoid production problems that impact overall quality.

▶ **www.mt.com/PowerDeck**

Maximize Your Production Yield
Industrial Weighing Solutions for Any Application

METTLER TOLEDO Industrial Weighing Solutions do more than just weigh your products, they help to maximize your yield. Our equipment works to increase productivity, maximize uptime, ensure accuracy and quality – and increase visibility into operations.

Discover solutions for every area of your manufacturing, quality or logistics operations, and start getting more out of your processes today.

Robust Scale Solutions
Durability for maximized up-time in harsh environments

Advanced Load Cell Technology
Accuracy and diagnostics to eliminate bad batches

User Friendly Software
Operator guidance to reduce error and boost efficiency

Global Services and Expertise
Expert services for ensured compliance and optimized processes

Explore Our Solutions:
▶ **www.mt.com/industrial**

www.mt.com

For more information