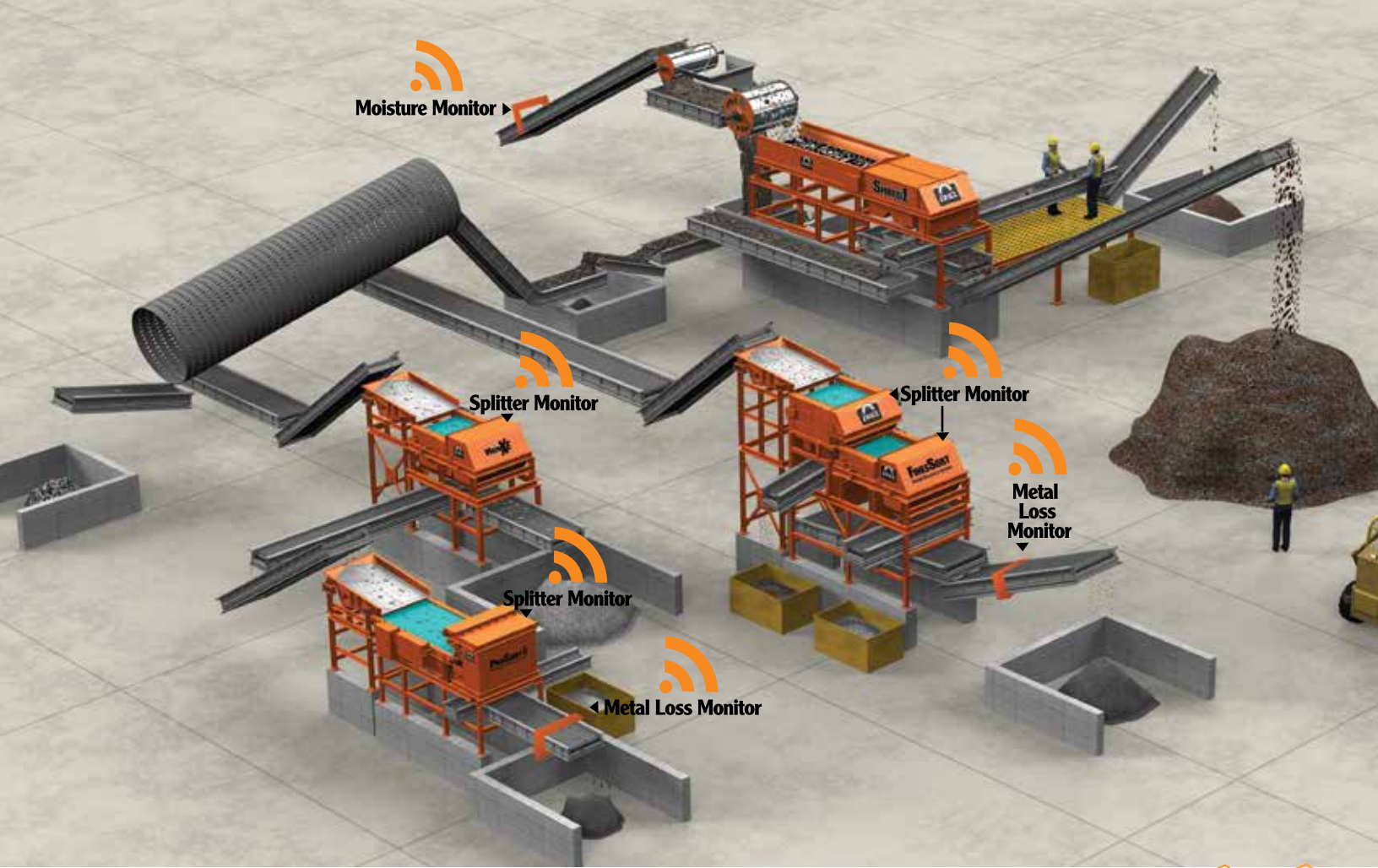


# smart

System Monitoring and Reporting Technology



**MONITORING PROCESS EQUIPMENT  
TO IMPROVE PERFORMANCE & RECOVERY**





# system monitoring & REPORTING TECHNOLOGY

Eriez new **SMART™** system continuously monitors critical ASR processes and sorting equipment to ensure operations are performing efficiently. **SMART**, *System Monitoring and Reporting Technology*, is a wireless cloud based system using sensors and monitors throughout a scrap yard to provide real-time reporting on the efficiency of sorting equipment and processes. These **SMART** monitors help operators track performance and identify short and long-term corrective actions.

The system monitors three areas:

- **Moisture Monitor** - tracks material moisture content post shredder
- **Splitter Monitors** - reports excess build-up on separator splitters
- **Metal Loss Monitors** - tracks unrecovered metals being sent to landfill

## SMART PORTAL

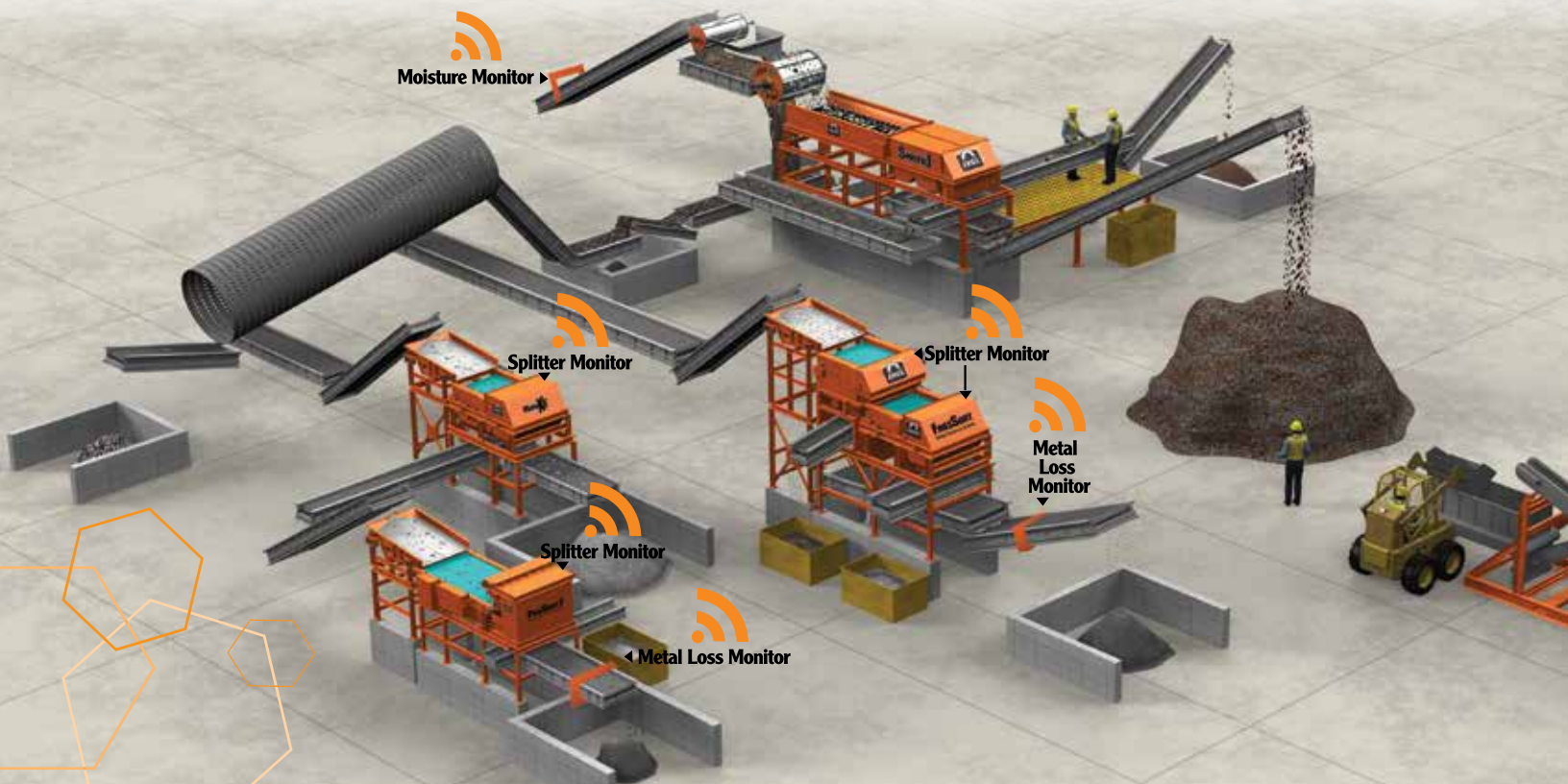
The **SMART** Portal is the center for all data collection and real time reporting. Conveniently located in the cloud, users access their password protected yard's **SMART** Hub to review reports, download data, analyze and set alerts.

## GET SMART

The illustration below shows locations where Eriez' wireless smart technology can be deployed.



Sounds Alarms & Sends Text Alerts





## Moisture Monitor

Eriez' **Moisture Monitor** continuously measures the moisture content of material exiting the shredder and reports the data locally or remotely via the Eriez SMART web portal.

In the recycling industry, the **Moisture Monitor** helps mill operators balance the amount of water used to prevent fires and reduce dust, while preventing excessive water usage which interferes with separation, and increases the net weight of fluff being transported to landfill.

- Electronically scans bulk material flows
- Monitors moisture content of shred
- Sends alerts when moisture contents exceeds preset limits
- Improves separation equipment performance
- Eliminates excessive water usage
- Reduces freight and landfill disposal costs



## Splitter Monitor

Installed on separation equipment the **Splitter Monitor** optically scans for debris build up on the lead edge of a splitter blade. A “clogged” splitter can greatly affect metal recovery if undetected for periods of time. As material builds up, the **Splitter Monitor** sends warning alerts via email or text message to prompt the appropriate personnel to clean the blade.

Using this smart technology reduces the frequency of random manual checks of splitters and improves metal recovery.

- Optically scans for material build up
- Sends alerts when splitters require attention
- Reduces labor cost
- Improves separation efficiency



## Metal Loss Monitor

The **Metal Loss Monitor** continuously scans your residue stream for valuable metal that has escaped your process and is headed for landfill disposal. Positioned either upstream or downstream of the hand picking station, the **MLM** alerts operators when a spike in metal count has been detected and aids in diagnosing where a process breakdown may have occurred.

The **MLM** is set to “count” certain size pieces of metal being conveyed on the final picking belt. If the pre-set threshold is broken (high metal count), the **MLM** signals an alarm and an event is recorded. An additional Text Alert can be sent to the operator for immediate action. If deemed too high, the material can be re-processed capturing the lost metal. Over time the **Metal Loss Monitor** will help diagnose specific weaknesses in an operator’s system. The goal is to gradually lower the pre-set threshold and reduce the physical count of metals escaping the process. The MLM supports Eriez’ ongoing efforts to push the **grade/recovery curve™** by providing absolute feedback on the process.

- Diagnostic tool continuously analyzes fluff stream
- Significantly reduces metal sent to landfills
- Sends auto-alerts when threshold limits have been exceeded
- Provides real-time data for trend analysis
- Cantilevered design installs without cutting the belt
- Rugged composite construction





The **SMART** portal is the cloud-based data collection point for all **SMART** devices. In addition to self monitoring equipment, Eriez' Recycling Team can provide monthly reports and provide data driven recommendations to improve separation equipment performance.

The report to the right is a sample of real-time feedback provided through **SMART** systems.

## WHAT'S THE VALUE OF JUST 1% OF EXTRA WATER?



Based on:

**1 ton of waste = 2,000 lbs**  
**1% extra moisture = 20 lbs of water**  
**Landfill cost = \$40/ton**

If a yard produces 6,000 ton of frag per month, it's also producing about 1,500 tons per month of landfill waste.

So, 1,500tn x \$40/tn = \$60,000 in landfill cost per month or \$720,000 per year.....

If we add just **1% of unnecessary moisture**, those 1,500 tons become 1,515 tons per month... a value of \$600/month or \$7,200/year.

Every % of added moisture to a yard paying only \$40/ton of landfill producing about 6,000 tons per month (pretty average) is an additional \$7,200 per year!

***Eriez' Moisture Monitor is a perfect solution both economically and environmentally.***



### World Authority in Separation Technologies

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