

EIT™ EFFICIENCY
IMPROVEMENT TOOL

24/7 DATA ACQUISITION & PLANT INTELLIGENCE SYSTEM



*Performance
through
Understanding*



**Gebo
Cermex**

MORE THAN DATA, ACTIONABLE INTELLIGENCE

In production as in business, time is of the essence and knowledge is power. EIT™ instantaneously and remotely connects you to your plant floor and provides you with the necessary information to control and improve your production.

You can only improve what you can measure

A production line is an interdependent system where a machine performance can impact the whole line. When a disruption happens it may incur efficiency losses, higher rate of rejects, quality issues and even jeopardize your responsiveness to market demand.

In order to quickly address and solve issues, a real-time access to production data is a must. However, the real challenge does not only consists in selecting a reliable system but also on finding one that will timely help you detect efficiency loss sources, set priorities and validate results. Data must become actionable information. This is what EIT™ is all about; built-in intelligence to maximize awareness, increase responsiveness and optimize effectiveness.



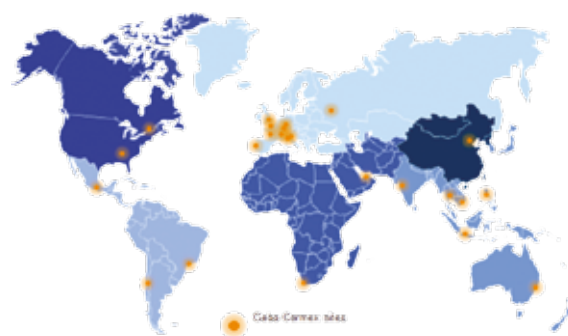
Expertise turned into actionable intelligence

Leveraging his expertise as a line integrator and OEM, in 1996, Gebo Cermex created a unique 24/7 data acquisition and line monitoring system. Designed by and for packaging professionals, the system grounds its strength in both a holistic approach of line concept and a rigorous analysis methodology based on packaging line design principles.

Via its PLC-based logic, EIT™ records 24/7 raw data and production events. The system being completely automated, manual interactions are not required. Benefiting from a broad set of screens and dashboards, users can monitor in real-time the line status, be informed of ongoing issues and efficiency loss sources and measure performance against targets. From operations to maintenance and engineering to management, with its built-in intelligence and operational insight, EIT™ helps you meet your daily challenges and bring performance to higher levels.

A universal solution

- Regardless of your market: Beverage, Food, Dairy, Home & Personal Care, Pharmaceutical, Consumer Product Goods, OEM...
- Regardless of your production assets
 - Integrator independent solution, suitable to any vendor new or existing line
 - Adapted to multiple production processes & technologies
 - Available alternative solutions for low technology lines or basic data acquisition
- Regardless of you location
 - Implemented in more than 60 countries
 - Worldwide support
 - Multilingual



Integration

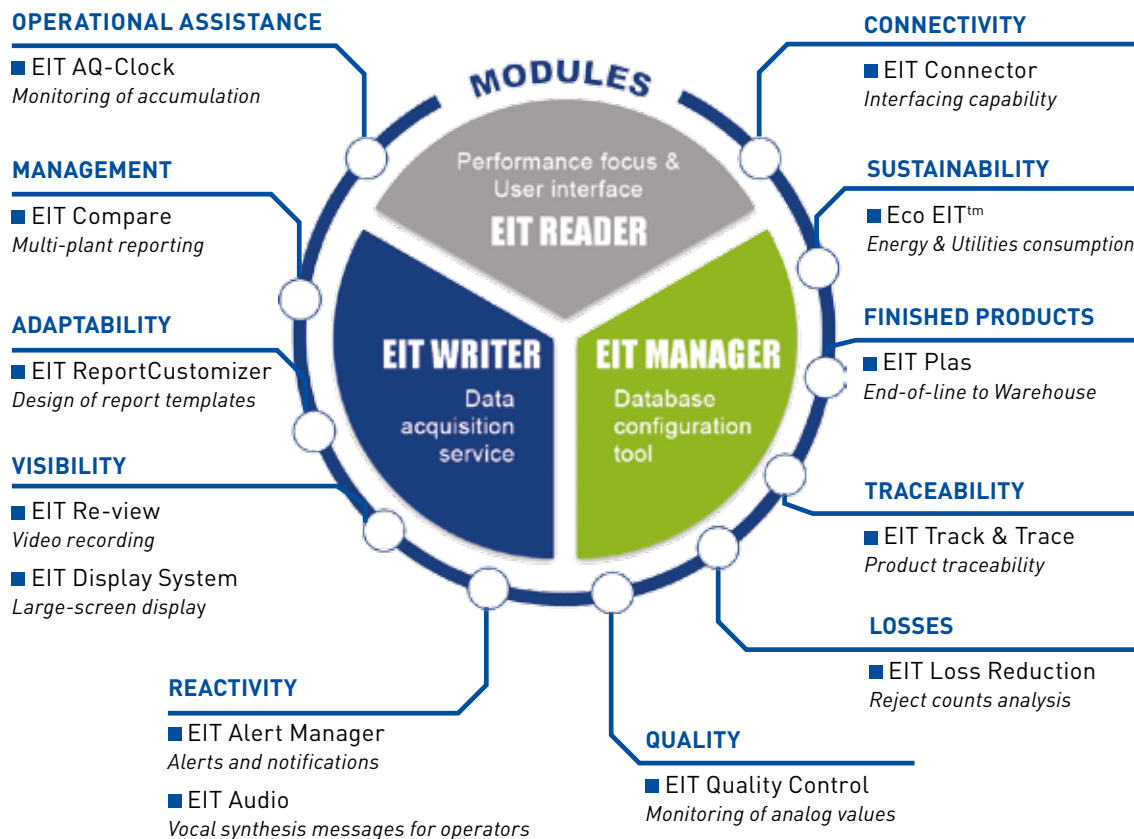
- Modular system combining various Manufacturing Execution System (MES) and Manufacturing Operations Management (MOM) functions
- From plant floor to Business systems (ERPs), interface with key operational applications
- Adapted solutions to meet technological constraints and requirements
- Scalable installation options, from general to detailed information
- Training & coaching services
 - Productivity & Continuous Improvement focuses
 - Data analysis



Proven operational benefits

- Operators
 - Accurate tracking of machine issues
 - Improved observation of specifications
 - Enhanced working methods
- OEMS
 - Reduction of machine wear and tear
 - Effective analysis of machine operation
 - Close monitoring of machine KPIs
- Maintenance Managers
 - Maintenance cost reduction
 - Leverage of preventive maintenance practices
 - TPM support & incentive tool
- Qualities Controls Supervisors
 - Effective detection of flaws and of out-of-spec values
 - Improved quality consistency
 - Supporting tool for continuous improvement programs
- Line Supervisors
 - Effective responsiveness to critical issues
 - Broader insight into actual downtime sources
 - Instantaneous and remote monitoring of line conditions
- Production Managers
 - Line fine-tuning effectiveness
 - Implementation of best practices
 - Reduction of waste
- Productivities Eng. & Consultants
 - Solving of recurrent problems
 - Accurate assessment of performance & comparisons among machines
 - Identification of means to streamline operations
- Plant Managers
 - Optimization of assets utilization
 - Line output increase
 - Enhanced profitability
- Corporate Engineers
 - Identification of cross organizational trends
 - Benchmark of best practices and performance
 - Increased R.O.I. and R.O.A.

EIT™ REAL-TIME OPERATIONAL INSIGHT



EIT WRITER

Reliable data collection procedure

The EIT Writer module is the core engine of the whole EIT™ system. To ensure performance and accuracy, it has been developed as an independent data acquisition program, reading raw data at the PLC level via OPC access rather than being based on HMI software. First fault latching ensures data accuracy regardless of line communication speeds. Raw data is then recorded into the database for further use by other EIT™ modules.

- 24/7 automated data acquisition
- Detection of the 1st downtime cause
- PLC-based logic
- Multiple-line handling capability

EIT MANAGER

Database configuration tool

The EIT Manager module is used at the beginning of the installation in order to configure all components related to an EIT™ projects. Over time, it can be used to add new parameters or elements or to modify and update existing ones. Access to this module is restricted to key and pre-authorized people in the plant. It is an effective way of increasing ownership of the system, thus lowering TCO.

- Machine references & parameters
- Faults, alarms, SKU, format, speed, shift
- Communication protocols for data acquisition
- Formula editor, pre-configured comments...



EIT READER

- Production status
 - Real-time, Historical, Estimated vs Target, Processed Counts, Rejects, machine status
 - KPIs (O.E.E., Availability, MTTR...)
 - Top faults
 - Based on time, shift, format, SKU...
- Detection of the first downtime cause
 - Automated data acquisition, manual inputs are optional
 - Line downtime, machines stops (reasons, time and occurrences)
 - Downtime categories: internal, upstream, downstream, external, custom (5M) ...
- Identification of efficiency loss sources
 - Root Cause Analysis / Line Audit in real time, based on line design concepts
- Drill down capability: Line, Machine, Downtime category and Fault levels
- Machines impacting (%) the line efficiency
- Stops impacting (%) the line efficiency
- Line KPIs, customization upon request
- Line flow & machines status displayed via color codes

EIT QUALITY CONTROL

Monitoring of quality parameters

- Tracking & trending of analog values
- Real-time monitoring
- Identification of deviations & out-of-specs
- Correlation of quality issues with machine status or production events

EIT AQ-CLOCK

Real-time measurement of accumulation

- Accumulation in-between and among machine
- Real-time update
- Available time before a stop impacts the whole line
- Increase operator's responsiveness

EIT LOSS REDUCTION

Detection of loss & waste causes

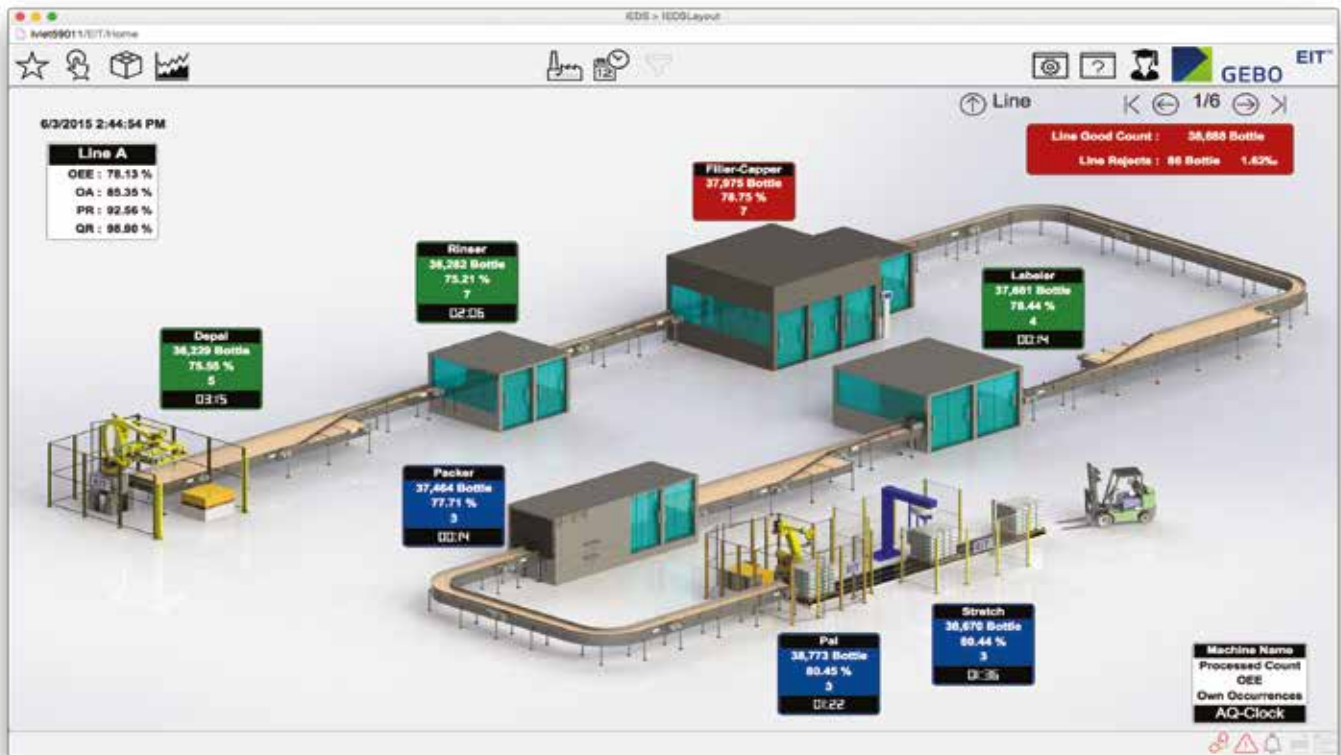
- Machine, device, line, plant
- Reject causes & out-of-specs, high level of details (under-fill, 1st minute run...)
- Alert-trigger capability
- Optional link to Reaction plan

EIT AUDIO

Vocal synthesis messages to operators

- WiFi, runs with Smartphone, PC, Tablet
- Individual configuration
- Multiple data: faults, out-of-specs, ongoing issues, upcoming changeover, « Next best move... »
- Enhance awareness

EIT™ AWARENESS, RESPONSIVENESS, EFFECTIVENESS



ECO EIT™

Energy & Utilities consumption

- Consumption per machine, conveying system, line, plant, product, CIP...
- Identification of greatest energy consumers
- Energy cost per product, equipment, production phases...
- Supporting tool for sustainability initiatives

EIT REPORT CUSTOMIZER

Template report development tool

- Creation of template reports
- Data selection from any EIT™ module
- Ability to access data from external sources
- Add-on to built-in reports

EIT COMPARE

Multi-line/plant wide benchmark

- Remote connection to multi-line/plant production data
- Quick access to several years of data
- Large scale comparison of equipment KPIs, faults, parameters...
- Supporting tool for capital requests and for monitoring vendors' guarantees

EIT ALERT MANAGER

Alert-trigger notifications

- Sending of alerts via multiple media: e-mail, cellular...
- Multi-condition capability
- Can be used for performance, quality, maintenance purposes...
- Powerful tool for optimizing responsiveness and effectiveness

EIT RE-VIEW

Video recording of operational procedures

- Power over Ethernet camera
- Visualization of actions done during a machine stop
- Improvement of working methods
- Effective review of events leading up to long MTTR duration

EIT TRACK & TRACE

Product traceability

- Work order, material, resource management
- Barcode scanner, coding & pallet labelling
- Confirmation & validation of EAN codes
- Identification of components & products by lot numbers

EIT PLAS

End-of-line to the Warehouse

- Data management
- Product identification
- Request for supply / material
- Interface with business and warehouse systems, LGV...

EIT CONNECTOR

Interface with systems & applications

- Business ERP systems
- Maintenance, scheduling... applications
- Web services, API, XML, CSV files...
- Favors seamless integration

EIT DISPLAY SYSTEM

Large scale visual display

- Plant-wide visualization of production data and status
- Outstanding 3D format
- Drill down capability
- Real-time display of KPIs, consumption, rejects, OEE, efficiency, ongoing faults...

ARCHITECTURE & SPECS

- 3-Tier, client/server
- Web-based
- PLC-based logic, OPC
- Windows platform
- MS-SQL, VMware
- Mobile platforms, Smartphone, tablet...

Gebo Cermex works in partnership with Sidel as part of The Sidel Group. Together, we are a leading provider of equipment and services for packaging liquids, foods and personal care products in PET, can, glass and other materials.

With over 37,000 machines installed in more than 190 countries, we have nearly 170 years of proven experience, with a strong focus on advanced systems, line engineering and innovation. Our 5,000+ employees worldwide are passionate about providing complete solutions that fulfil customer needs and boost the performance of their lines, products and businesses.

Delivering this level of performance requires that we continuously understand our customers' challenges and commit to meeting their unique goals. We do this through dialogue, and by understanding the needs of their markets, production and value chains. We complement this by applying our strong technical knowledge and smart-data analytics to support maximum lifetime productivity to its full potential.

We call it *Performance through Understanding*.

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