Supply chain AI and image recognition for high-volume logistics

Siena Insights is a modular suite of AI technology providing Package Intelligence across your supply chain. Transform every box into traceable, actionable data. Share images and data enterprisewide.

The only vendor-agnostic, no-code AI solution for retail, shipping and logistics, Siena Insights enables true visibility so you can sort non-stop.

Developed by Siena Analytics for the largest supply chains in the world.

→ Capture real-time images as packages move through your scanning tunnels

→ Browse a searchable database of package images and dimensions

→ Get actionable dashboards on the DC floor

→ Run analytics at the package, tunnel, facility or enterprise level

BUSINESS SOLUTIONS

→ **Ensure vendor compliance:** Automatically flag problematic packaging

→ **Monitor equipment health:** IIoT remote diagnostics for predictive maintenance

→ **Automate sorting and exception handling:** AI investigates non-compliant boxes

Siena Insights = Tunnel Insights + Facility Insights + Learning Insights

Package Intelligence to empower QA teams, engineers and supply chain ops

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FLEXIBLE INFRASTRUCTURE

→ **Scalable:** Provisions new resources quickly at lower cost

→ **Extensible:** Easily add new data sources, using a NoSQL core

EFFICIENT MANAGEMENT

→ **Storage efficient:** Saves images at the optimal resolution

→ **Secure:** Fully conforms to security and network standards

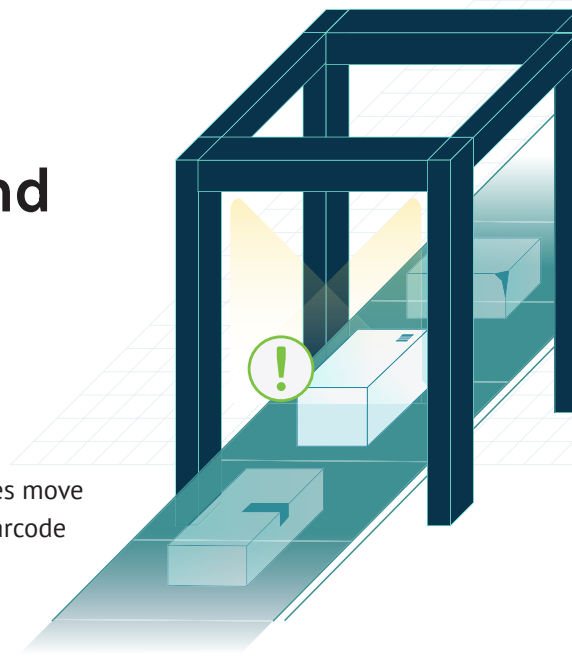→ **Locally accessible:** Analyzes package data at the edge

DYNAMIC APPLICATION

→ **Integrated:** Enterprise connector apps for business intelligence

→ **Vendor agnostic:** Captures data from multiple sensors — regardless of manufacturer

→ **Data architecture:** High volume, variety and velocity

SIENA ANALYTICS

Capture images, dimensions and barcode data for every package scanned

Tunnel Insights is the core of the Siena Insights product suite, with live feeds in TunnelView and equipment-specific dashboards.

View packages in real-time or slide TunnelView back for a full history. As packages move through, Package Intelligence populates the Siena Data Table: 6-sided images, barcode IDs and dimensions.

On-site users see which camera successfully decoded the barcode. Each camera's view can be chosen independently. Dashboards display read rates for each camera in the tunnel, to ensure equipment is working properly.

Seamless integration — automatically shares all data with Facility Insights and Learning Insights

→ TunnelView: Real-time image stream and barcode readouts of all packages as they are scanned

→ Queries, no-read filters and replays by timeframe

→ Efficient edge storage for quick, local access and analysis

→ Read rates for each camera

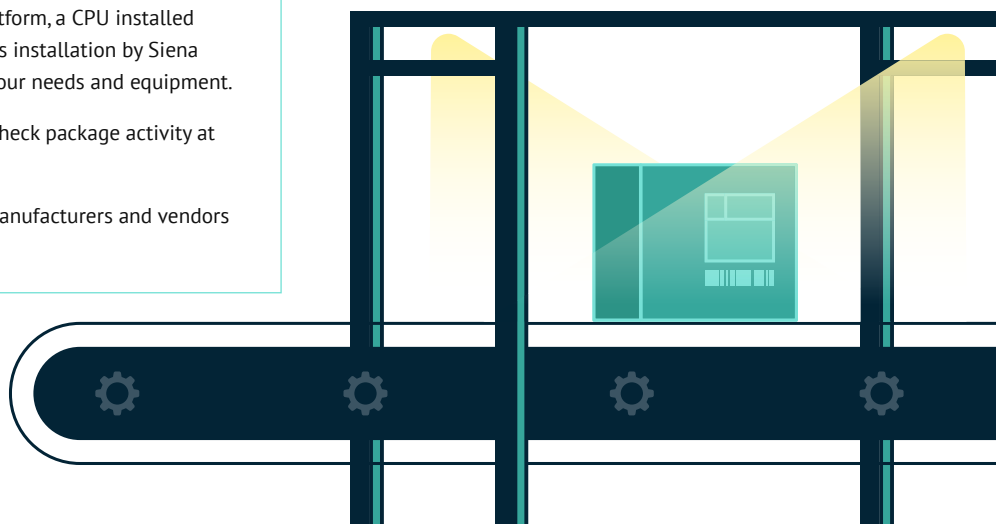→ Performance stats for the tunnel and each sensor

BUSINESS SOLUTIONS

→ Diagnose maintenance and package issues faster

→ Identify and resolve no reads

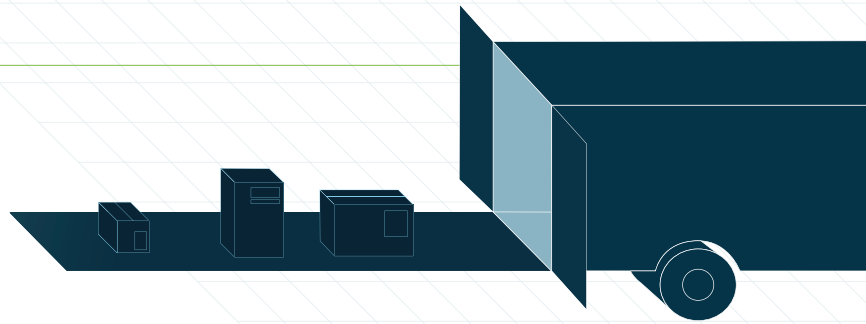→ Maximize equipment uptime

→ Monitor sensor performance

ON-SITE / OFF-SITE INTEGRATION

Tunnel Insights runs on Siena's Edge Compute platform, a CPU installed locally right at your scanning tunnels. On-premises installation by Siena Analytics technicians is available, customized to your needs and equipment.

Local access: Allows maintenance technicians to check package activity at the source

Cloud connectivity: Enables image sharing with manufacturers and vendors

SIENA ANALYTICS

Full visibility into day-to-day package activity across multiple tunnels

Get powerful analytics for views into the performance of your scanning system — from a single tunnel to your entire facility. Your camera tunnels capture millions of images every day. Customizable AI reporting, dashboards and alerts convert those images into Package Intelligence on your sorting and shipping operations.

Visibility answers questions before they're asked. Catch torn or crushed packaging and alert vendors. Go from troubleshooting to predictive maintenance and reduce downtime.

Customizable, real-time analytics and dashboards for all relevant tunnel and facility reporting

→ Dashboard view of all tunnels in a facility

→ Remote monitoring of scanning performance

→ Customizable AI reporting and alerts for anomaly detection

→ Event monitoring and read rate breakdown

→ Powerful search and export for all barcodes, package conditions and dimension attributes

→ Filter by no-read, multi-read, valid-read, side-by-side, barcodes and your own custom criteria

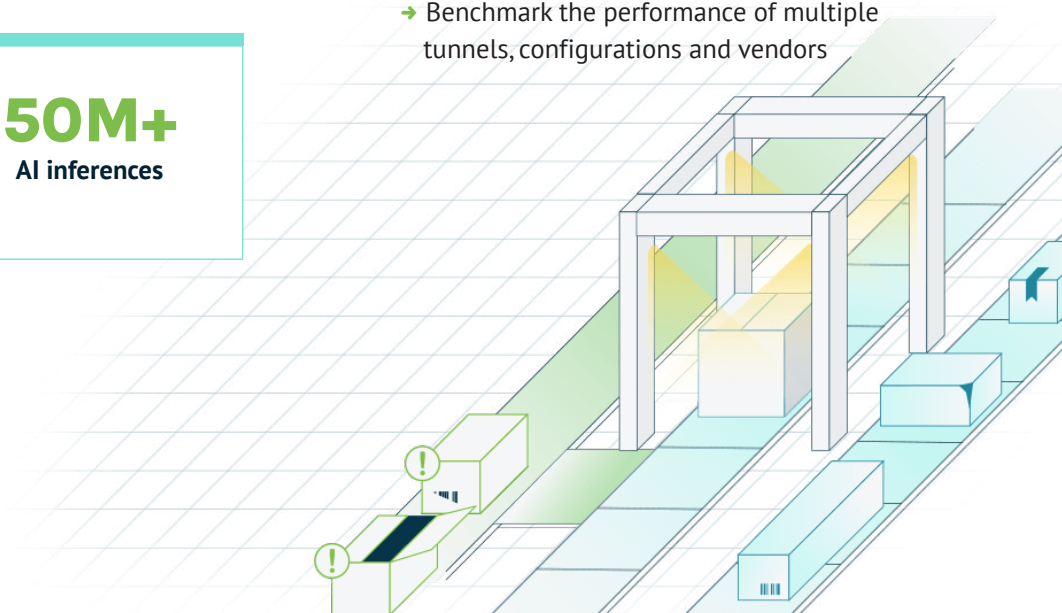→ Histogram view based on package parameters and no-reads

BUSINESS SOLUTIONS

→ Identify systemic issues for supply chain planning

→ Apply rich analytics to detect bottlenecks in your sorting operation

→ Maximize uptime by alerting personnel as issues are detected

→ Improve capacity utilization: compare dimension measurements against vendor manifests

→ Benchmark the performance of multiple tunnels, configurations and vendors

50M+
scan events per day

50M+
AI inferences

SIENA ANALYTICS

Immediate insights into vendor compliance, QA and problem packages

Create, deploy and run AI models to do more with Package Intelligence. Powerful AI models identify the reasons for no-reads: torn or split bars, labels obscured by straps, printed poorly, camera focus, dirty lenses and other scanning issues.

Siena's Learning Insights Edge AI applies sophisticated algorithms to business logic based on your custom business needs. View, filter and export AI inferences in Siena Facility Insights so you can ship more efficiently and monetize supply chain innovations faster.

The only end-to-end, no-code solution for training and deploying AI models unique to your supply chain

→ Label images based on business values you define

→ Capability to deploy multiple AI & ML models across the enterprise

→ Includes up to 3 complex pipelines

→ Orchestrate complex, multi-step AI models — to run in a real-time production environment

BUSINESS SOLUTIONS

→ Automatically detect and classify problem packages

→ Create a robust Vendor Compliance program

→ Automate quality control and exception handling

→ Detect delivery and vendor issues

→ Analyze & compare patterns from dimension measurements against vendor manifests

→ Divert fewer packages to intervention (hospital)

YOUR DIGITAL TRANSFORMATION PARTNER

Siena Analytics is an AI company — born in the distribution center — your partner for a faster, more flexible omnichannel supply chain.

SIENA ANALYTICS