



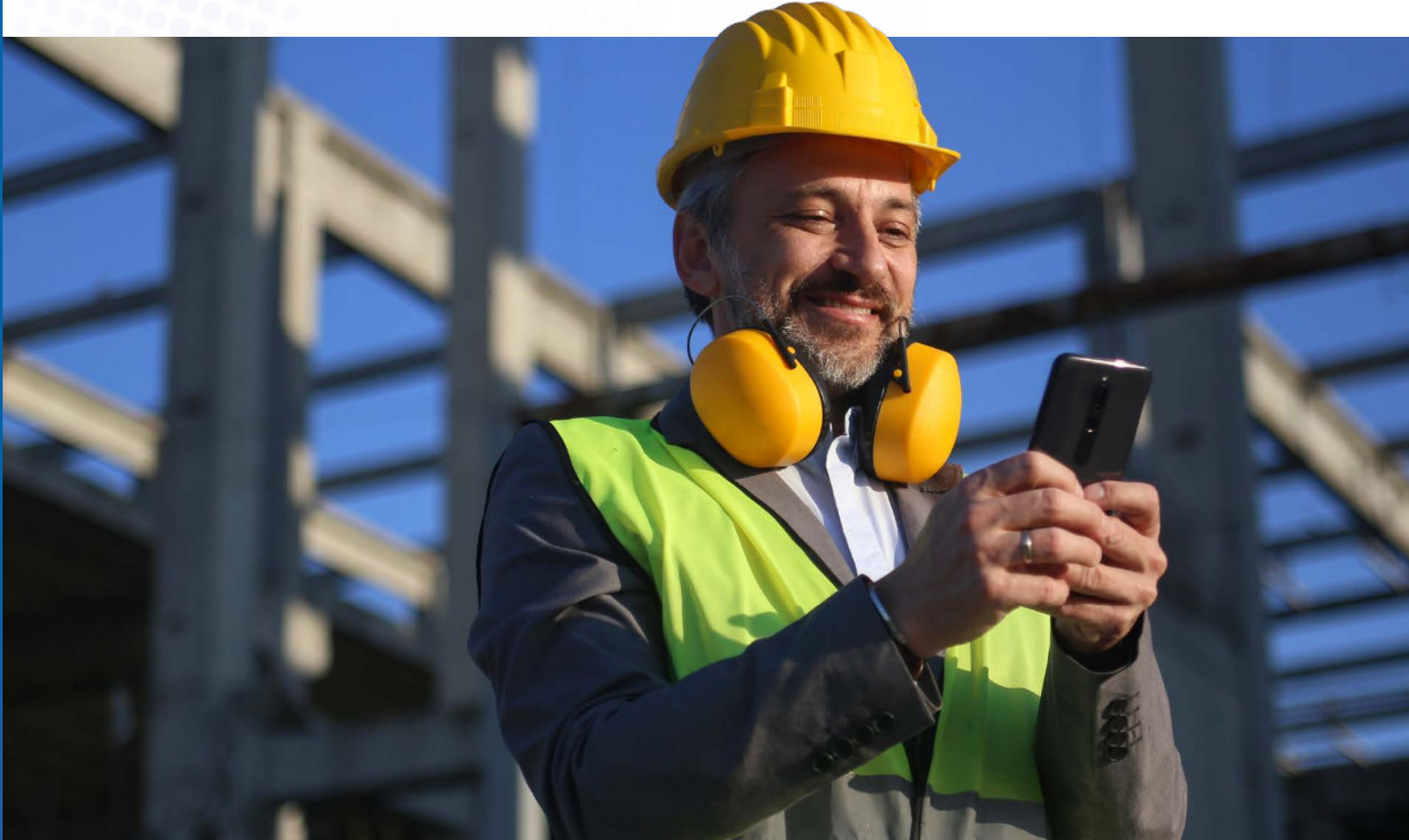
Asphalt's Shift to Connected Operations



The modern asphalt plant combines cloud visibility and onsite execution.

See how connecting production controls to Command Cloud, producers gain real-time insight into operations, more efficient workflows, and accurate production data while preserving the reliability of plant-level control systems.

Modern Asphalt Operations Need **Connected Workflows.**



Asphalt operations have long depended on plant-centric systems designed to run reliably in a local, self-contained environment.

Unlike other segments where dispatch and enterprise workflows became standardized, asphalt plants often evolved with limited system-to-system integration. Many integrations were physical or signal-based, such as pulse-per-ton and silo select signals, rather than modern, data-driven integration.

That legacy approach worked for decades because it matched the plant's core requirement: keep production running. However, it also left producers with fragmented workflows, limited real-time visibility, and technology stacks that struggle to scale into today's security and cloud expectations.

That reality is driving a new approach to asphalt operations. Rather than replacing proven plant controls, modern architectures separate cloud-based business workflows from onsite plant execution. This model preserves the reliability of local production while enabling the visibility, connectivity, and scalability needed to support today's operations.

The Modern Model: Cloud Workflow + Plant Execution

Command Cloud asphalt production controls introduces a deliberate architectural split. Command Cloud becomes the cloud-based ticketing and workflow interface, while cloud-connected asphalt controls remain the onsite execution layer that communicates with the plant's batching and loadout systems.

- Command Cloud initiates load requests, manages ticketing workflows, and provides reporting and visibility.
- The cloud-connected asphalt plant controls execute batching and loadout at the plant, enforces plant constraints, and transmits production and ticketing outcomes back to Command Cloud.
- The plant still runs locally through the batching computer, which keeps production reliable and safe.

Establishing Plant Connectivity

The first step is to configure your asphalt plant controls to Command Cloud. This creates the secure connection between Command Cloud and the plant. Once the device is paired, Command Cloud retrieves plant configuration details directly from asphalt plant controls. This confirms connectivity and ensures cloud workflows align with the plant's physical setup, including:

- Plant type (for example, batch plant)
- Silo definitions (for example, silo 1, 2, 3)
- Bin and scale layout for aggregates, asphalt cement, RAP, and mineral filler

This configuration pull is more than a health check. It is the foundation for safe downstream workflows. Cloud-originated requests must match the plant's actual equipment and constraints.

The Connected Loop: Load Requests, Silo Charging, and Loadout

Once the plant configuration is established, Command Cloud can initiate operational requests that are executed at the plant through the asphalt plant controls. The result is a closed-loop workflow where Command Cloud sends a request, the plant controls execute onsite, and completion data flows back to the cloud. Load request flow:

- User initiates a load request in Command Cloud ticketing.
- Asphalt Plant Controls receives the request onsite and presents it to the operator.
- Operator executes batching and loadout locally using the plant controls and onsite computer.
- The asphalt plant controls return ticket weights back to Command Cloud.
- Ticket can be reviewed, exported, and printed from the cloud interface.



COMMAND CLOUD

Initiates load requests, manages ticketing workflows, and provides reporting and visibility



CLOUD CONNECTED

Execute batching and loadout at the plant, enforce plant constraints, and transmit production to Command Cloud



LOCAL OPS

The plant runs locally through the batching computer which keeps production reliable and safe

Asphalt-Specific Capability: Silo Charging

Asphalt plants often produce into silos to build inventory and keep trucks moving. Instead of loading every batch directly into a truck, producers can charge a silo first, then load out trucks from that silo by weight as needed. Command Cloud supports this operating model through a dedicated Silo Charge workflow. Using Silo Charge, users can:

- Select the target silo
- Select the mix, including variants such as different RAP percentages
- Set the target tonnage (for example, 100 tons)
- Send the request to the Asphalt Plant Controls for onsite execution and monitoring

Plant constraints remain enforced locally. If a silo is already near capacity, batching pauses or stops to prevent overflow. This ensures cloud-initiated requests follow the same safety and control rules required for reliable plant operation.

Ticketing Outcomes and Compliance-Grade Data

In connected workflows, completed ticket information flows back to Command Cloud after loadout. In batch plant environments, tickets can include batch weights and tolerance data, which are often required for compliance and inspection reporting. If a material weight falls outside tolerance, the exception can be flagged on the ticket, and any decision to accept an out-of-tolerance result remains a deliberate operator action at the plant.

Mix Design Nuance: What Customers See vs. What Plants Run

Asphalt producers often run multiple mix variants for operational and cost reasons, especially when RAP is involved. A single commercial mix sold to customers may have several plant-level versions, such as virgin, 10% RAP, or 20% RAP. Command Cloud in conjunction with cloud-connected asphalt plant controls support this reality by maintaining a consistent commercial product identity on orders and tickets, while still capturing the specific mix variant used at the plant for accurate costing, quality tracking, and material usage reporting. Because RAP can contribute reusable asphalt cement, these variants can also reduce the amount of virgin asphalt cement required in the final mix design.

Material Usage and Downstream Accounting

Material usage data can be captured during production and sent downstream for inventory and supply accounting. Depending on the plant type and workflow, usage can be based on actual batch results or calculated from the mix design and cold-feed formula tied to loadout quantities. In either case, the objective is the same: convert production activity into accurate material consumption and inventory updates.

The Modernization Path: From Legacy Stacks to SQL and .NET

A major driver for the connected model is modernization. Many legacy onsite systems were built on older technologies. By enabling Command Cloud connectivity, producers can transition toward modern SQL-backed and .NET-based foundations while maintaining plant execution stability and minimizing operational disruption. For plants already running Libra, this modernization can be achieved without requiring changes to the plant automation hardware, since plant control and execution remain onsite.





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This approach modernizes the producer’s experience without forcing a rip-and-replace of plant controls. It allows producers to adopt cloud capabilities incrementally while maintaining trusted onsite execution.

Proven in Production: Cloud-Connected Asphalt Operations at Scale

A leading global supplier of cement, aggregates, ready mix concrete, and asphalt successfully went live with Command Cloud connected to our Libra asphalt plant controls to support asphalt and aggregates operations at batch plants in New York. The go-live demonstrated a practical, production-ready model where cloud workflows and plant execution operate together, enabling connected ticketing and plant communication while keeping control and batching stability onsite.

Following implementation, internal reporting showed productivity and throughput improving day-by-day, with overall platform usage and output steadily increasing as the team expanded adoption. The rollout also reflected an enterprise-scale deployment approach, extending beyond a single location and supporting a broader multi-site footprint across aggregates and HMA operations.

In addition, the customer expanded beyond plant connectivity by rolling out Material Supply for asphalt, strengthening the flow of production usage and inventory signals into supply workflows. They also leveraged Stonemont for quality control, supported through cloud integration, creating a more connected ecosystem between production execution, ticketing outcomes, quality reporting, and materials accountability. This is an example of how cloud-enabled plant operations can scale across business units without disrupting plant performance.

As more producers modernize their operations, the goal is no longer simply to digitize plant workflows. It is to create a connected operating model that preserves the reliability of onsite production while extending visibility, intelligence, and coordination across the enterprise. Cloud-connected asphalt operations provide that foundation.

Learn How Connected Workflows Fit Your Operation

Contact Command Alkon to schedule a discovery session and site readiness review.

