unifize

75% Faster Non Conformance Closures

The Will-Burt Company's Journey With Unifize

Executive summary

The Will-Burt Company has been building high-performance elevation, lighting, and surveillance systems for more than a century. Their products are used in demanding environments - defense, telecom, emergency response, industrial operations - where reliability isn't optional.

Behind this strong reputation, however, the day-to-day reality of managing quality across a large and diverse operation was getting increasingly complicated. With nearly a thousand suppliers delivering dozens of commodities, the team spent significant time piecing together information from spreadsheets, Access databases, shared folders, and long email trails.

Purchased non-conformance reports (NCRs), internal NCRs, supplier performance data, corrective actions, audits, and engineering updates were all being tracked in different places. This made it challenging to connect issues, spot patterns, or close the loop quickly. Even straightforward questions such as "Has this supplier had problems before?" "Is this issue happening across product lines?" "Did we fix this already?" required digging through multiple systems.

The need wasn't just for new software, but for a simpler, connected way of working.
Unifize gave Will-Burt exactly that. Over time, they moved their supplier quality workflows, NCR processes, audits, document control, training records, and safety logs into one centralized, conversation-driven platform. They also began capturing the Voice of Customer (VoC) insights directly inside Unifize, giving teams a clearer view of recurring issues and customer expectations. With everything in one place, teams finally had complete visibility into each issue from start to finish.

The impact was significant:

- **NCR closure times dropped from weeks to days**
- **Supplier performance became easier to measure and discuss**
- **Audit preparation became faster and far more organized**
- **Corrective actions were easier to track and complete**
- **Cross-functional teams worked with much better visibility**
- **Leadership gained a real-time view of quality across the company**

This case study breaks down the whole picture: the complexity of Will-Burt's products, the scale of their supplier network, the specific process issues they were facing, and how each Unifize module helped improve how their teams work every day.

About The Will-Burt Company

Industry: Manufacturing

Location: Orrville, Ohio, USA

The Will-Burt Company has been a trusted name in engineered elevation and lighting systems since 1894. From its headquarters in Orrville, Ohio, the company has grown into a global manufacturer with customers across defense, telecommunications, public safety, industrial operations, and emergency response.

At the core of Will-Burt's work is a combination of mechanical engineering, precision fabrication, electrical integration, and rigorous quality control. Their product range includes telescoping masts, mobile towers, lighting systems, surveillance units, and integrated video solutions, many of which are custom-built to meet specific customer or mission requirements.

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Over the years, the company has expanded both its capabilities and its reach. A significant part of this growth came from the acquisition of GEROH in Germany, now known as Will-Burt Germany, a facility specializing in high-performance mechanical mast systems for military and emergency applications. This addition strengthened the company's global footprint and deepened its precision engineering expertise.

What hasn't changed, though, is their commitment to building equipment that performs under tough conditions and lasts for years. Will-Burt products are expected to deploy reliably in harsh climates, support sensitive communication and surveillance equipment, remain stable, and pass strict industry and defense standards. This creates a natural expectation for strong internal processes, dependable supplier performance, and consistent execution across multiple teams.

Even with more than a century of experience, Will-Burt continues to evolve. They've invested heavily in modern manufacturing, machining, powder coating, assembly, and testing facilities. They also support OEM integration, custom engineering, and contract manufacturing for customers who need specialized components or fully assembled systems.

All of this makes Will-Burt a company that blends long-standing craftsmanship with modern engineering and manufacturing practices. This combination also demands reliable, connected quality systems to keep everything running smoothly.

But understanding the company is only part of the story. The real challenge comes from the sheer engineering and supplier complexity behind each product line.

Operational complexity & why quality was hard

Managing quality at Will-Burt wasn't simply about inspecting parts; it was about orchestrating an interconnected ecosystem of engineering complexity, diverse raw materials, and strict compliance requirements. This section brings together all three dimensions that made quality management increasingly challenging.

Product lines & production complexity

Will-Burt's products may look simple on the outside, but behind each one is a mix of engineering, materials, and manufacturing steps that make their operations far more complex than they appear.

Their product range spans several families, each with its own design considerations, suppliers, and quality requirements.

Elevation systems

These are the masts and towers for which Will-Burt is best known. They include steel towers, aluminum tower systems, rapid-deployment trailers, pneumatic masts, and lightweight carbon fiber units designed for military and emergency applications.

Each system involves:

- Precision machining
- Structural fabrication
- Surface finishing and coating
- Pneumatic or electro-mechanical integration
- Electrical wiring
- Final assembly and load testing

To build these reliably, Will-Burt relies on:

- CNC machining centers and lathes for critical components such as mast sections, collars, bases, and mounting brackets
- Plate and tube processing equipment, such as saws, lasers, and plasma cutters, to cut structural members to size

- Press brakes and forming equipment to shape enclosures, brackets, and structural elements
- Welding stations and fixtures for repeatable structural welds on towers, trailer frames, and mounts
- Dedicated mast test stands to extend, retract, and load-test systems under controlled conditions

Many of these systems must remain stable under extreme conditions and still deploy smoothly every time. That level of reliability puts a heavy emphasis on consistent quality, dependable suppliers, and tight control over design revisions.

Lighting systems

Will-Burt's lighting range includes rooftop light towers for fire and rescue vehicles, intelligent LED systems, portable lighting units, and fleet upgrade kits. These solutions combine mechanical lift systems with electronics, optics, power management, and weather-resistant enclosures.

Production for these products involves:

- LED module assembly
- Electrical harnessing
- Mechanical housings
- IP-rated enclosures
- UL/ETL-compliant wiring practices

From a manufacturing standpoint, these lines make extensive use of:

- Sheet-metal fabrication cells (shearing, punching, bending) to create housings, brackets, and mounting plates
- Precision machining centers for critical interfaces and mounting features
- Assembly benches and fixture-based workstations for repeatable mechanical and electrical assembly
- Harness boards, crimp tools, and automated testers for wiring harness build and verification
- Environmental sealing and leak-test equipment to verify enclosure integrity for outdoor and mobile use

Because these systems are often used in emergency environments, performance and durability standards are high. Every component must be sourced, inspected, and assembled with reliability in mind.

Video & surveillance systems

These include camera modules, thermal imaging systems, pan-tilt units, protective housings, and fully integrated surveillance packages. These often mount on Will-Burt's mast systems, combining mechanical stability with sensitive electronics.

Production here requires:

- Handling of precision optics and sensors
- Electronics assembly
- Integration with communication systems
- Vibration and environmental testing

To support this, Will-Burt's operations incorporate:

- Fine-detail machining and small-part fabrication for pan-tilt assemblies, brackets, and precision housings
- Electronics assembly benches with ESD-safe tools and workstations
- Optical alignment and focus fixtures to correctly position cameras and lenses
- Vibration tables, thermal chambers, and environmental test stands to simulate in-field operating conditions and verify long-term performance

These products must withstand harsh outdoor conditions while delivering precise, stable imaging, adding another layer of complexity to the manufacturing process.

Manufacturing processes & machinery

Across all product lines, Will-Burt operates a vertically integrated manufacturing process that takes parts from raw materials through fabrication, coating, assembly, and final testing - often within the same campus. The company balances modern automation with skilled manual work to efficiently handle high-mix, low-volume production.

Key processes and machinery include:

Metal fabrication & machining

- CNC machining centers and turning centers for mast sections, couplings, hubs, and precision brackets
- Horizontal and vertical mills for structural components and custom interfaces
- Saws, lasers, or plasma cutting equipment for cutting plate, tube, and extrusions to length and profile
- Press brakes for bending enclosures, mounting plates, and structural elements
- Tapping, drilling, and deburring equipment to complete critical features and ensure safe handling.

These machines allow Will-Burt to hold tight tolerances on both structural and precision components, which is essential for smooth mast extension, proper load distribution, and repeatable assembly.

Welding & joining

- Dedicated welding cells with MIG and TIG equipment for carbon steel, stainless, and aluminum components
- Weld fixtures and jigs to keep tall structures and frames square and consistent
- Positioners and manipulators to safely handle large mast sections, tower frames, and trailers during welding

Consistent weld quality is crucial not only for structural integrity but also for maintaining alignment so that telescoping sections, rotating assemblies, and lifting mechanisms work as designed.

Surface preparation & finishing

- Media blasting/surface prep equipment to clean and profile parts before coating
- Automated or semi-automated wash lines for cleaning and pre-treatment
- Powder coating booths and curing ovens for durable, corrosion-resistant finishes
- Coating thickness gauges and adhesion test tools to verify coating quality

These finishing processes protect equipment that may be exposed to salt fog, UV radiation, temperature extremes, and rough handling over many years of service.

Mechanical assembly & integration

- Dedicated assembly cells for different product families: masts, trailers, light towers, and surveillance systems
- Torque-controlled tools for fasteners that affect safety, structural performance, or sealing
- Custom fixtures and assembly jigs to position mast sections, lights, cameras, and control modules consistently
- Workstations for hydraulic, pneumatic, and electro-mechanical integration, including regulators, valves, and drive components

Assemblers bring together machined parts, fabricated structures, purchased components, and electronics to create complete systems ready for testing and shipment.

Electrical wiring & controls

- Harness boards and layout fixtures for repeatable cable and harness builds
- Crimping, stripping, and labeling tools for consistent terminations and identification
- Test stands to verify continuity, insulation resistance, and correct operation of control circuits and lighting systems

This ensures that when systems reach the field, they power up correctly, communicate reliably, and interface cleanly with customer equipment.

Testing & validation

- Mechanical load-test rigs for masts and towers, including extension, retraction, and stability checks
- Functional test stations for lighting systems and camera assemblies
- Environmental test equipment (temperature, humidity, vibration) to simulate real-world conditions where required

These test stages confirm that the combination of design, materials, and manufacturing processes delivers a product that will survive in mission-critical environments.

Why is manufacturing these products complex?

Across all these product lines, the complexity comes from several factors:

Multiple engineering disciplines
Mechanical, electrical, electronic, and structural engineering teams work together on every build.

Large number of suppliers
With nearly 1,000 suppliers providing parts across more than 20 product lines, supplier quality becomes critical.

Heavy reliance on raw material quality
Steel, aluminum, carbon fiber, coatings, pneumatics, electronics - every commodity must meet its specification for the final product to be dependable.

Demanding operating environments
Defense and emergency applications require compliance with strict standards such as MIL-STD-810, ITAR, and NFPA 1901.

High-mix, low-volume production
Many orders are custom-built or configured-to-order, which means suppliers must deliver consistent quality without the benefit of mass production.

Demanding operating environments
Defense and emergency applications require compliance with strict standards such as MIL-STD-810, ITAR, and NFPA 1901.

Precision requirements
Even minor deviations in machining, coating, wiring, or assembly can lead to field failures.

This combination of engineering depth, material variety, and performance expectations makes Will-Burt's operations highly interconnected and also makes any process gaps or quality disconnects far more disruptive than in simpler manufacturing environments.

Raw materials sourced

Will-Burt works with a large and diverse supplier base – nearly 965 active suppliers spanning metals, electronics, coatings, pneumatics, fasteners, and custom assemblies. Because their products cover more than 20 product lines and serve mission-critical applications, the quality and consistency of incoming material are a direct driver of product performance and reliability.

They purchase everything from steel bars and plates to aluminum extrusions, composite tubes, machined components, wiring harnesses, LED modules, sensors, coatings, hydraulic fittings, and mechanical hardware. Many of these parts are built to customer or industry specifications and must meet tight dimensional, mechanical, and environmental requirements. That makes supplier selection, qualification, and ongoing performance management core to Will-Burt's quality strategy.

Rather than looking at raw materials in isolation, Will-Burt ties each commodity to the product families that depend on it most. This helps the team see where supplier risk is concentrated, which materials are most critical to end-user performance, and where nonconformances can have the widest impact.

Critical materials by product family:

Elevation systems

Elevation products rely heavily on structural integrity and controlled motion, so they depend on a set of critical sourced materials and components, including:

- **Structural steels** – plate, bar, and tubing from mills and service centers, specified by grade, yield strength, and finish for towers, frames, and mast sections
- **Aluminum extrusions and plate** – used where weight reduction is essential, sourced in specific alloys and tempers for telescoping sections and structural members
- **Composite tubes** – carbon-fiber and other advanced composites from specialist suppliers for ultra-light, high-stiffness mast designs
- **Precision metal components** – pins, bushings, collars, flanges, and brackets supplied as finished machined parts to defined tolerances
- **Hydraulic and pneumatic hardware** – cylinders, valves, regulators, hoses, and fittings purchased as complete items or assemblies from fluid-power suppliers
- **Mechanical hardware** – bearings, seals, fasteners, and locking mechanisms sourced to specific load, corrosion, and environmental requirements
- **Protective coatings and treatments** – galvanizing, primers, and specialty coating systems applied by approved vendors or supplied as specified materials

Any variation in steel properties, extrusion quality, composite lay-up, or motion components can affect stability, extension behavior, or long-term field durability.

Lighting systems

Lighting products combine structural elements with power electronics and optics. Their reliability hinges on the materials and components that manage heat, protect against the environment, and deliver light where it's needed.

Key purchased items include:

- **Aluminum housings and extruded profiles** – supplied in specific geometries and finishes for light heads, arms, and structural supports
- **Sheet-metal components** – brackets, covers, and mounting plates sourced as formed parts to defined dimensions and surface requirements
- **LED modules and drivers** – boards, drivers, and power-supply units from electronics suppliers, selected for lumen output, efficiency, and lifetime ratings
- **Optical components** – lenses, reflectors, and diffusers molded to optical specifications for beam pattern control
- **Wiring harnesses and cable assemblies** – built by harness suppliers to Will-Burt's pinouts, lengths, and labeling standards
- **Connectors, switches, and protection devices** – electrical hardware sourced to meet environmental ratings and regulatory standards
- **Sealing materials** – gaskets, O-rings, and potting compounds from rubber and chemical suppliers to achieve IP-rated enclosure performance

Issues with any of these materials can directly lead to water ingress, premature failures, or noncompliance with customer specifications.

Video & surveillance systems

Surveillance products sit at the intersection of optics, electronics, and precision mechanics. Will-Burt depends on a specialized supply base for:

- **Imaging sensors and camera cores** – visible and thermal modules sourced from optical and electro-optical manufacturers with defined resolution and performance specifications
- **Printed circuit boards and electronic assemblies** – PCBs, control boards, and compute modules provided by electronics suppliers under controlled build and test requirements
- **Precision housings and brackets** – aluminum and stainless steel components supplied as finished parts to tight tolerances for alignment and sealing

- **Pan-tilt mechanisms** – geared assemblies, motors, and encoders purchased as subassemblies or components from motion-control vendors
- **Optical windows and domes** – glass, acrylic, or specialized infrared-transparent materials sourced with specific transmission and coating properties
- **Cabling and connectivity** – Ethernet, coaxial, fiber, and power cables, plus associated connectors, rated for outdoor and mobile use
- **Environmental sealing elements** – gaskets, desiccants, and sealing components to protect sensitive internals from moisture and contamination

Because these systems are often mounted on elevation equipment and exposed to vibration, shock, and weather, the quality of sourced electronics and mechanical components directly affects image clarity, stability, and system uptime.

Cross-cutting commodities

Across elevation, lighting, and surveillance product lines, several commodity groups appear everywhere:

- **Standard and specialty fasteners** – including stainless, coated, and high-strength hardware from multiple fastener suppliers
- **Adhesives, sealants, and tapes** – used for bonding, sealing, and vibration control
- **Labels and identification tags** – sourced with specific durability and legibility requirements for traceability
- **Packaging materials** – crates, pallets, foam, and protective wraps sized for large, complex assemblies

Problems with these cross-cutting materials rarely stay isolated to a single product line. A fastener plating issue, for example, can quickly become a multi-product concern.

This supplier and material landscape means that incoming quality has a direct impact on Will-Burt's ability to build and ship reliably. Dimensional errors, material substitutions, surface defects, or documentation gaps at the supplier level can slow production, drive rework, or create downstream failures. With nearly 1,000 suppliers feeding high-mix production, Will-Burt needed a clear, consistent way to see how each commodity and vendor was performing, and to act quickly when problems arose.

Compliance & regulatory requirements

Will-Burt operates in industries where reliability, safety, and traceability are non-negotiable. To support this, the company aligns with a wide range of standards across quality, environmental management, defense, aerospace, and automotive-supplier expectations.

These include:

- **ISO 9001 / ISO 9000** – core quality management requirements
- **ISO 14001** – environmental management
- **AS9100** – aerospace quality management
- **AS9120** – aerospace distributor requirements
- **IATF 16949** – automotive supply-chain quality standards
- **NADCAP** – aerospace and defense special-process compliance
- **NDA / ITAR**-related controls – handling of sensitive and export-controlled information

These standards shape how Will-Burt designs, builds, tests, documents, and audits every product that leaves the facility.

Why compliance adds operational pressure?

Meeting these standards isn't just about passing audits; it affects day-to-day operations.
Each requirement brings its own expectations for documentation, traceability, training, supplier oversight, and recordkeeping. Engineering changes must be documented. Every material needs clear identification. Purchased parts must be tied to the correct PO and specification. Calibration, safety, and inspection records must be up to date. And during audits, teams must be able to show evidence quickly, confidently, and without gaps.

Because these standards overlap across different parts of the business, even minor disconnects can lead to delays, rework, audit findings, or customer concerns. This makes consistency across teams essential and also makes a connected, real-time quality system especially valuable.

Challenges and solutions

Disconnected systems → One unified platform

Challenge (Before)

For years, Will-Burt's quality processes lived in a maze of disconnected tools. Different teams kept data in spreadsheets, Microsoft Access, Visual Basic forms, shared folders, and long email threads. Every process had its own place to live: one system for internal NCRs, another for supplier issues, another for customer complaints, and so on. None of these talked to each other, so information stayed scattered.

The ripple effect was real.
A supplier NCR entry logged in a spreadsheet wouldn't automatically link to a related internal defect in Access. Quality engineers had to chase updates through endless emails, copying the exact details from tool to tool. Duplicate data entry was constant. Trends were hard to spot. Issues slipped through the cracks simply because there was no single place to see the whole picture.

The team had essentially become "masters at spreadsheets and Access," but even mastery couldn't overcome the fragmentation.

Solution (After)

Unifize replaced five separate systems with one connected platform. Every quality record now lives in the same place - supplier NCRs, internal NCRs, customer complaints, CAPAs, documents, everything. Instead of bouncing between files and inboxes, teams log into one system to see every action, status, and discussion in real time.

Related issues can finally be linked.

This consolidation didn't just organize the data; it changed how people work.
Teams collaborate faster. Updates are transparent. Leadership gets real-time dashboards without waiting for reports. And most importantly, quality decisions now happen with a complete, accurate picture in front of them.

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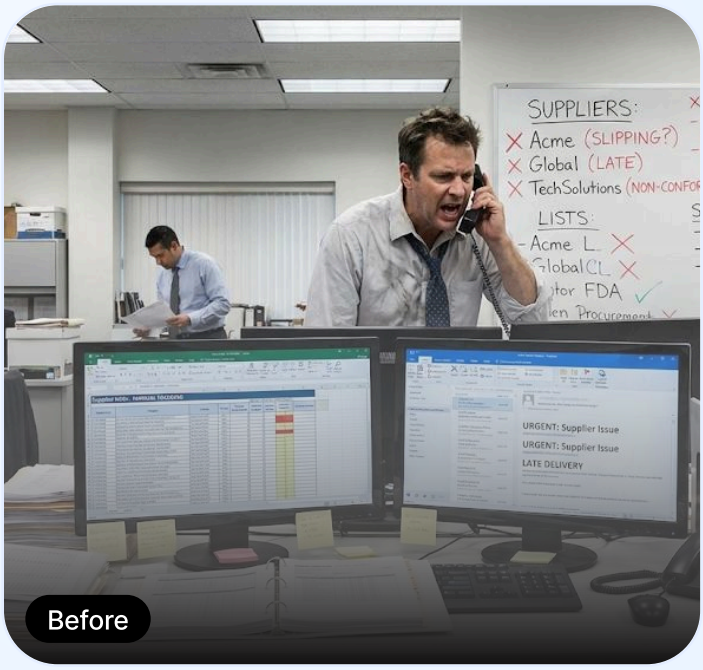

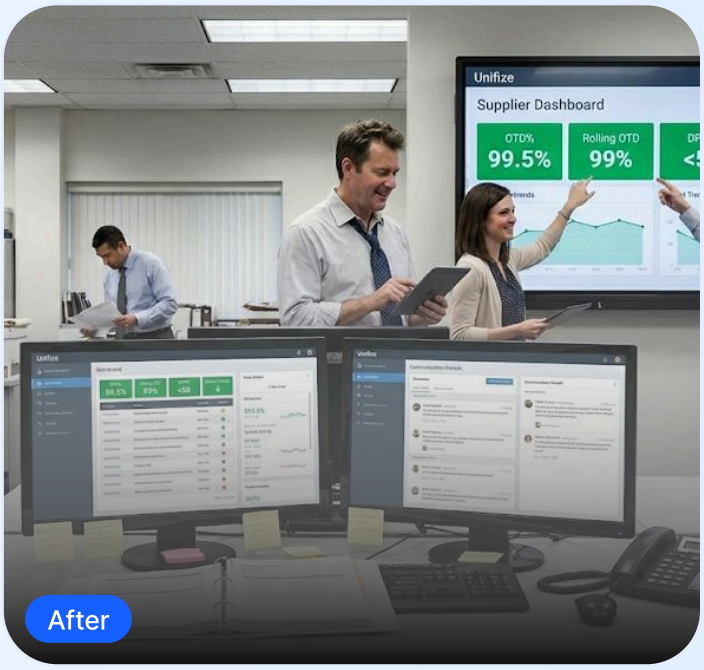

Reactive firefighting → Proactive collaboration

Challenge (Before)

Will-Burt works with about 965 active suppliers across multiple commodity categories and product lines. Managing supplier performance was slow and reactive.

Supplier NCRs were logged in spreadsheets, manually tracked, and communicated primarily via email. There was no live view of metrics like OTD%, rolling OTD, DPPM, or defect trends. Supplier scorecards were assembled manually, sometimes only before quarterly reviews.

Without real-time data, problems weren't spotted early. A supplier might be slipping for months before anyone noticed. Communication loops were long and inconsistent.

Solution (After)

Unifize's Supplier Quality and Procurement modules gave Will-Burt a connected supplier management workflow.

Now:

- Every supplier NCR is logged in Unifize
- Supplier discussions happen in shared threads
- PO receipts, issues, corrective actions, and RMAs are all linked
- Supplier dashboards update automatically
- Digital scorecards track OTD%, rolling averages, DPPM, and status of open/closed issues

Managers can see performance trends instantly. Supplier conversations are traceable. And Will-Burt can address problems early rather than react late.

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Slow closure of defects → Reduction of cycle times through proactive collaboration

Challenge (Before)

Even when non-conformances were recorded, closing them out took far too long. Internal NCRs, supplier NCRs, and related actions were scattered across forms, spreadsheets, and emails. Root cause discussions happened in meetings or side threads, and follow-ups weren't always visible to everyone involved.

As a result, the average NCR could sit open for 4–5 weeks before reaching closure, with quality, engineering, production, and supplier quality all waiting on each other for updates.

Solution (After)

With Unifize, every NCR and CAR now runs through a connected workflow. Internal and Purchased NCRs sit in the same system, each with:

- Clearly defined fields for operation, department, reason code, cause code, and MRB disposition
- Linked corrective actions where needed
- A shared conversation thread where stakeholders review evidence, ask questions, and agree on next steps

Because all the information, discussions, and approvals live in one place, teams can collaborate on investigations and decisions in real time. That structure is one of the reasons Will-Burt was able to cut **average NCR closure time from 4–5 weeks down to just over 7 days,** without losing any of the detail they rely on for true root cause analysis.

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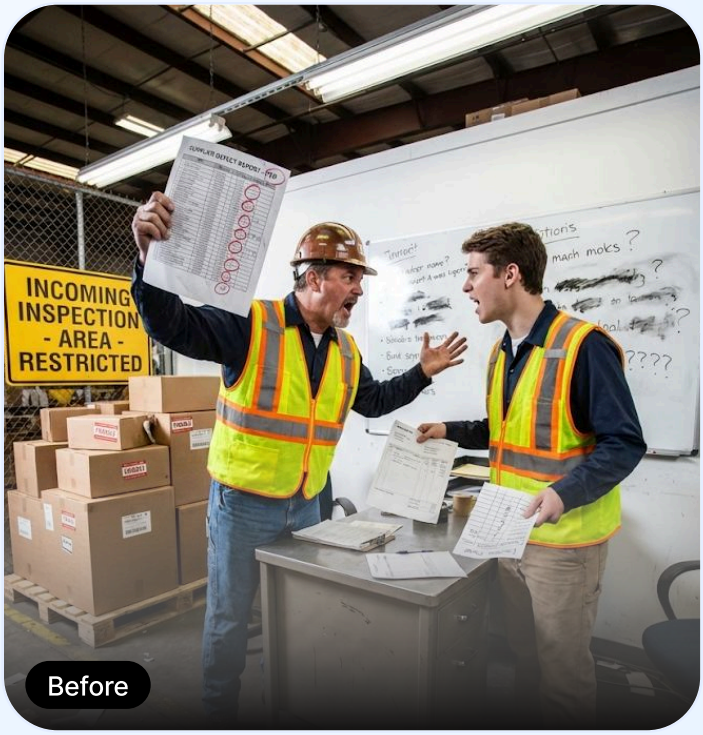

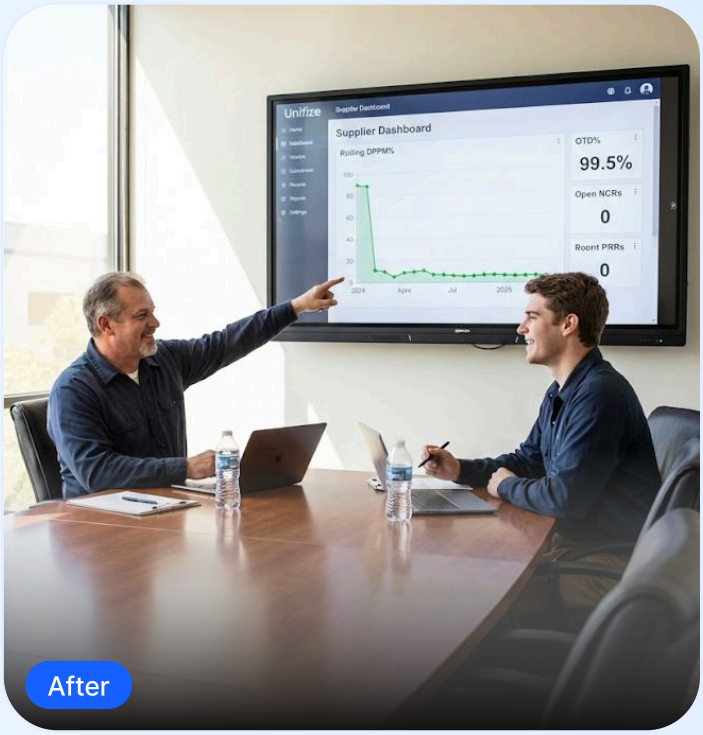

Limited visibility into supplier defect trends → Supplier dashboards that drive measurable improvement

Challenge (Before)

Supplier performance was typically reviewed using static reports built from historical data. While scorecards captured OTD% and basic quality metrics, it was difficult to see rolling trends in defect rates for a specific supplier or commodity over time.

Without a visual, month-by-month view of DPPM, teams could not easily see whether corrective actions were having a sustained impact or whether issues were creeping back in after a few months.

Solution (After)

Unifize's supplier dashboards introduced rolling DPPM charts and similar visualizations directly on the supplier record.

For example, Boville's "Rolling DPPM%" chart shows:

- Extremely high defect levels in early 2024
- A sharp drop over the next few months
- Then a long period of low, stable DPPM through late 2024 and into 2025, with only small, isolated bumps

That pattern reflects a shift from firefighting individual shipments to running a closed loop of NCRs, CARs, and supplier reviews in Unifize. The dashboard gives both Will-Burt and the supplier clear, shared evidence that the actions they've taken are sustained over time, not just short-term fixes.

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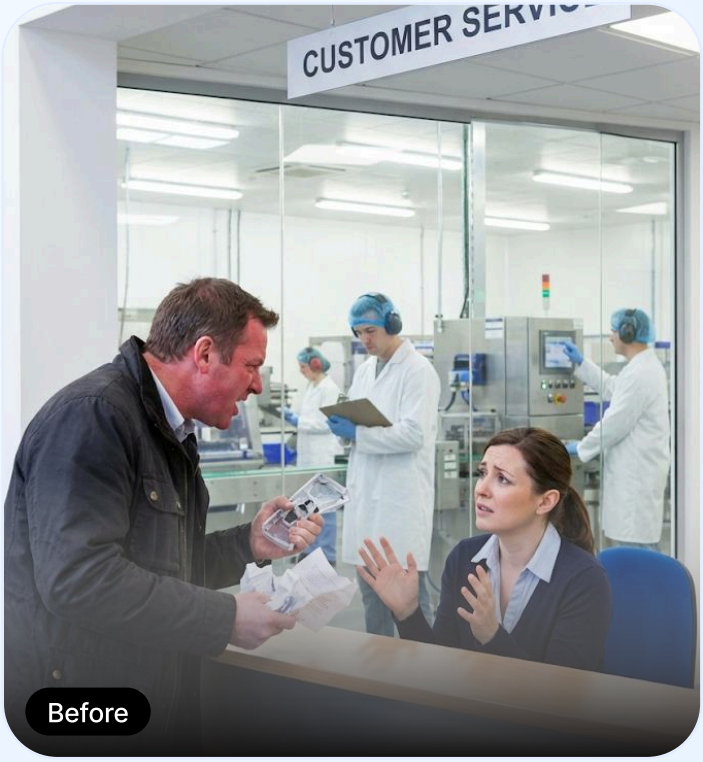

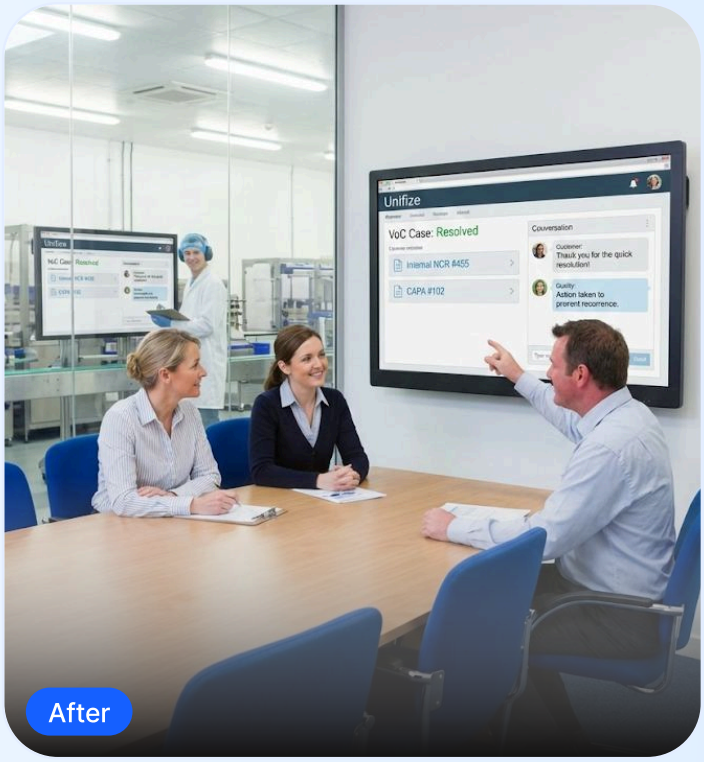

Customer complaints → A fully connected feedback loop

Challenge (Before)

Customer feedback (VoC) was handled separately from internal quality processes. Complaints were logged in different systems or managed through email. It often took detective work to realize that a customer issue was tied to an internal NCR or even a supplier problem.

They would receive a VoC and only later realize it was connected to a supplier issue or an internal defect elsewhere. These connections usually surfaced only during management reviews - far too late to be meaningful in real time.

Solution (After)

Unifize brought customer feedback into the same platform as every other quality process.

Now, VoC cases:

- Are logged directly into Unifize
- Can be linked to internal NCRs or supplier NCRs
- Share one conversation thread so all context lives together
- Flow naturally into root cause analysis and corrective actions

Customer complaint closure time dropped from 4+ weeks to ~11.4 days.
Teams respond faster, investigations are more accurate, and customers get clearer updates. Most importantly, field issues now translate directly into internal improvements because everything is connected.

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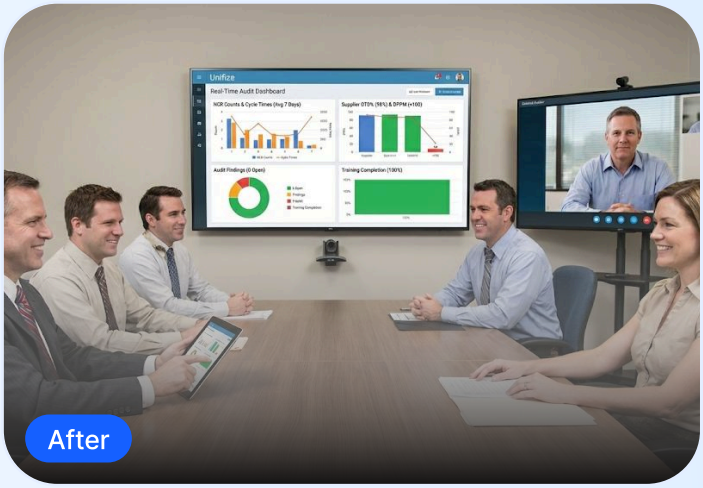

Manual reporting & painful audits → Real-time dashboards & remote auditing

Challenge (Before)
Reporting took days and required pulling data from multiple systems. Trend analysis was done after the fact because everything had to be merged manually. Preparing for internal, customer, or ISO audits meant digging through folders, spreadsheets, Access databases, and email archives.

Remote audits were nearly impossible because the data wasn't centralized.

Solution (After)
With Unifize, reporting and audit prep became almost effortless.

Will-Burt now uses live dashboards for:

- NCR counts and cycle times
- Supplier performance (OTD%, rolling OTD, DPPM)
- Audit findings
- Training completion
- Safety and EHS metrics

Unifize also introduced automated monthly supplier reports, in which each supplier's scorecard refreshes based on their most recent NCRs, delivery data, and performance trends. Instead of manually rebuilding reports, procurement simply opens the latest auto-generated view and is ready for the next supplier meeting.

Audit readiness is dramatically stronger too. Up to 90–95% of audits (internal or external) can be conducted remotely because auditors can review controlled-access records directly in Unifize.

Compliance with ISO and defense standards is easier to prove because every document, action, and approval has a built-in audit trail.

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Siloed training & safety → Integrated, insight-driven processes

Challenge (Before)

Training and EHS processes lived outside the quality system. Training records sat in HR files; safety incidents were reported separately. This made it hard to spot connections. For example, whether recurring workmanship issues suggested a training gap.

Safety reports weren't tied to quality actions or continuous improvement efforts. And manual tracking made it hard to prove compliance.

Solution (After)

Will-Burt digitized training and safety workflows through Unifize's Training Management modules.

Now:

- Certifications, training records, and expirations are in Unifize
- Safety incidents follow the same structured workflow as NCRs
- Training needs can be triggered automatically when documents change
- Safety/quality/operations insights can be connected across teams

This integration provides Will-Burt with a clearer picture of how training, safety, and quality interact, thereby improving both workforce readiness and compliance.

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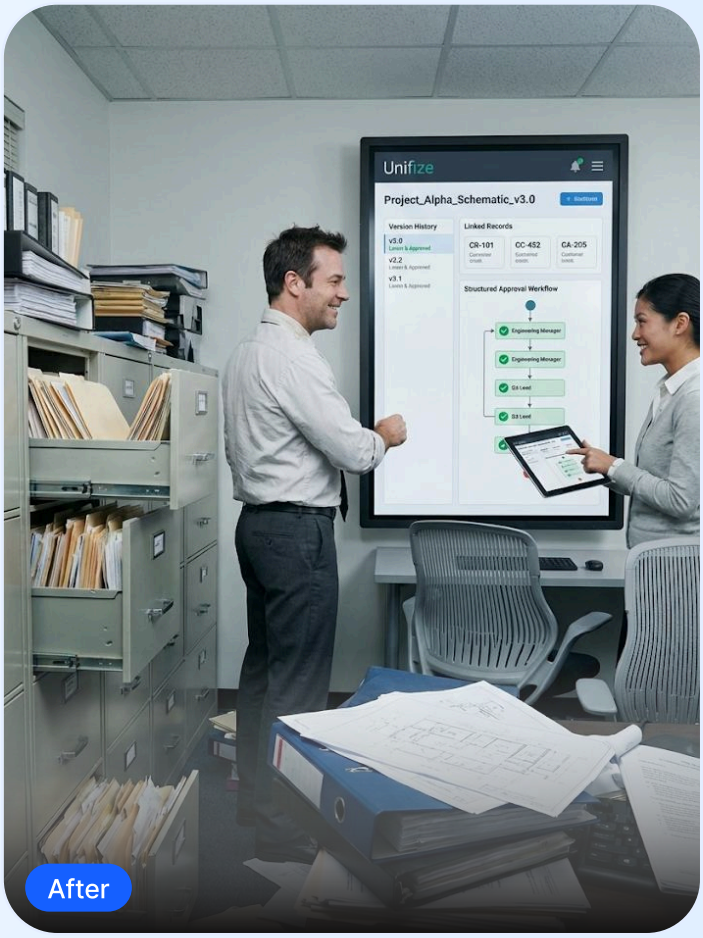

Document chaos → Full traceability

Challenge (Before)

Documents lived in shared folders with limited control, and engineering changes were often managed through emails or standalone tools. Occasionally, outdated revisions made their way onto the floor. Tracing why a change was made or linking it to a specific NCR or CAPA took unnecessary work.

Solution (After)

Unifize's Document Control and Change Control modules turned the entire process into a single, traceable workflow.

Now:

- Every document lives in Unifize with a version history
- Changes go through structured routing and approval
- Teams always see the latest revision
- Change requests can be linked to NCRs, CAPAs, customer complaints, or field issues
- Auditors can instantly review revision history and approvals

This eliminated version confusion, strengthened compliance, and created clear traceability from issue → change → verification.

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Fragmented incoming inspection → Structured receiving & material verification

Challenge (Before)

Incoming material inspections were inconsistent because each inspector followed their own process. Photos, notes, and measurements were stored in different places, and there was no standard way to record what happened at receiving. When an issue was found, jumping between ERP, spreadsheets, and emails made it challenging to connect the inspection results to the purchase order or the supplier.

Solution (After)

Unifize's incoming inspection workflow standardized the receiving process. Inspectors log results directly into Unifize, attach photos, record measurements, and tie the record to the exact PO line item. If an issue is found, it is converted instantly into a Supplier NCR, with all inspection data carried forward. This eliminated re-entry, miscommunication, and the guesswork of tracking down what actually happened at receiving.

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Will-Burt's connected quality workflows in Unifize

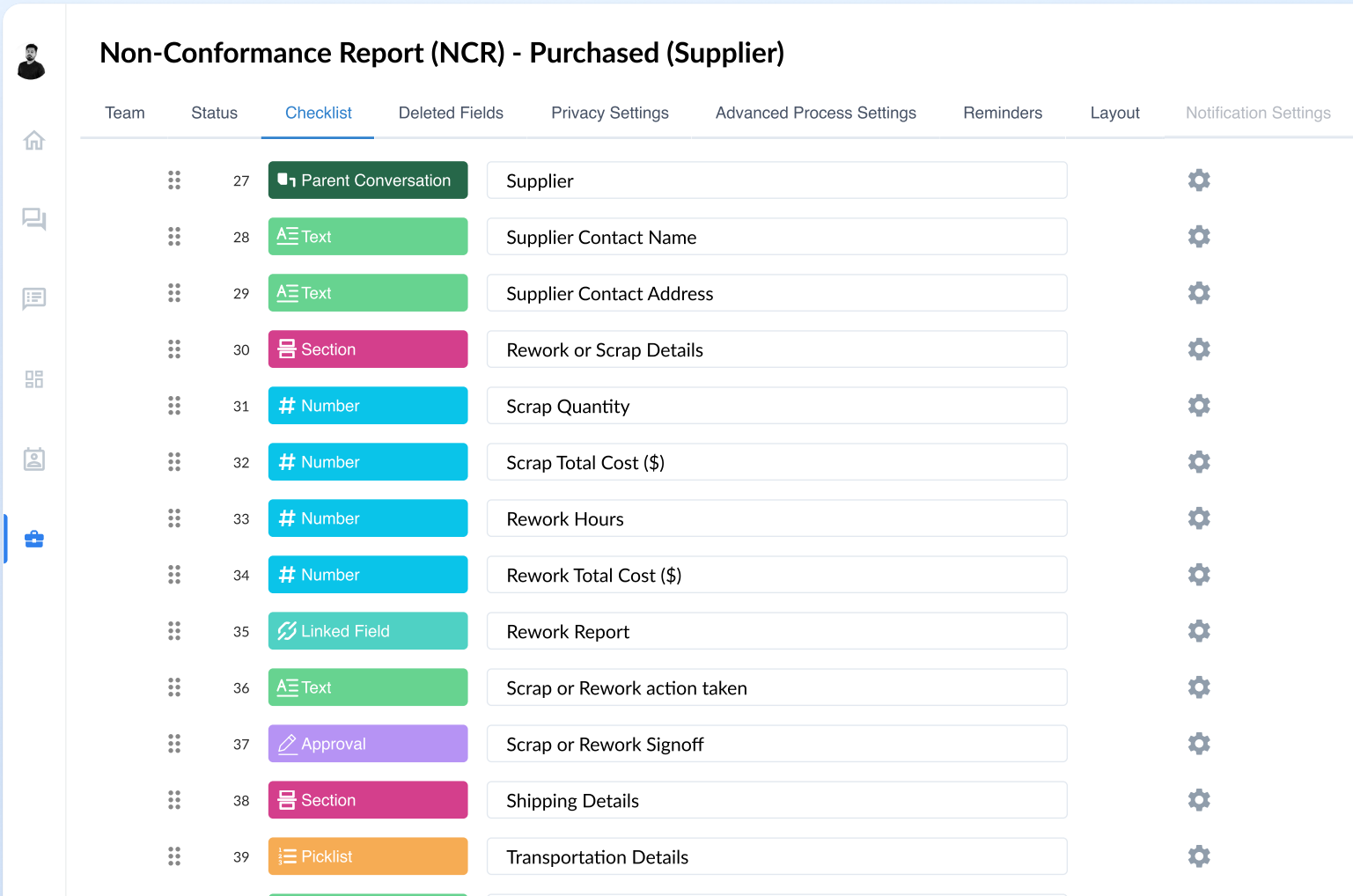
Once Will-Burt consolidated its fragmented processes into Unifize, the fundamental transformation began. Instead of isolated tools and email threads, every workflow - supplier issues, internal defects, customer complaints, corrective actions, documents, audits, and training - moved into a shared, real-time environment. The following sections outline how each workflow now operates inside Unifize and how they connect to create a complete, traceable quality ecosystem.

Capturing and managing NCRs

Will-Burt uses two dedicated NCR workflows inside Unifize:

- **Internal NCRs** – issues created or discovered inside Will-Burt's own operations
- **Purchased (Supplier) NCRs** – issues traced back to vendor-supplied material or components

Both workflows sit in the same platform but use field sets tailored to how those issues are handled.

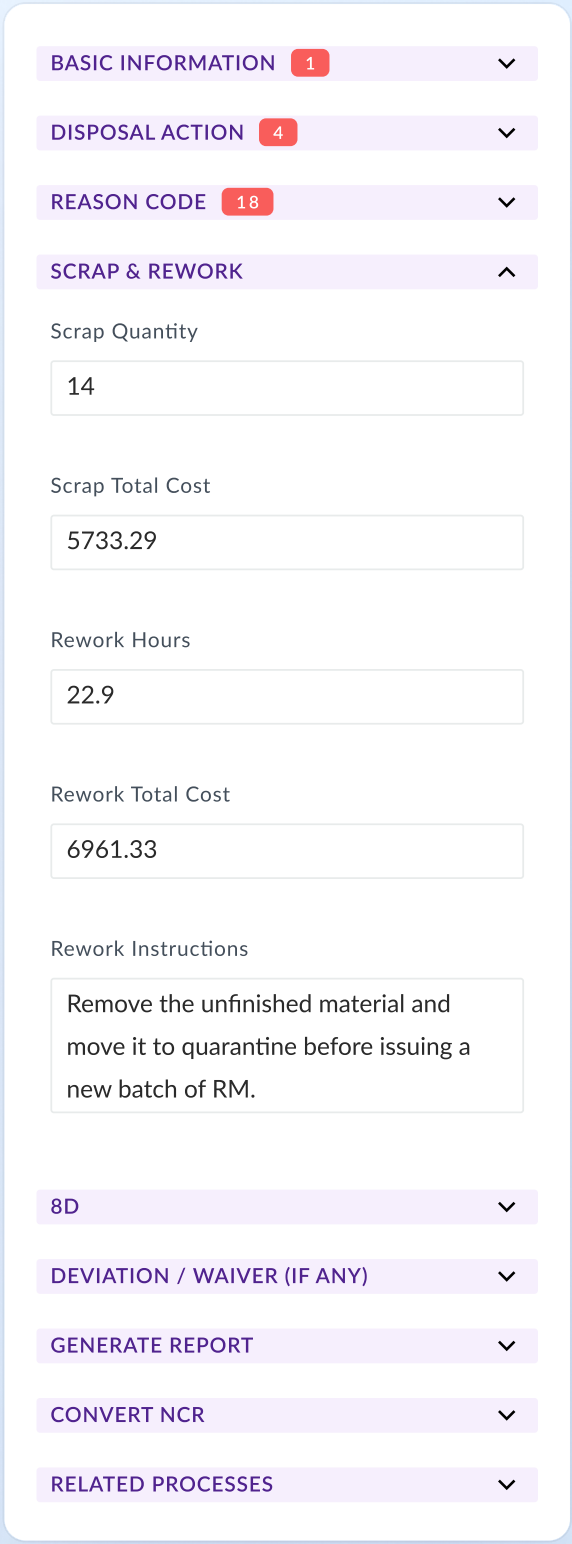


Internal NCRs: everything that happens inside the four walls

Each Internal NCR record contains:

- **What part is affected** – tied back to the part record in Unifize
- **How the defect is classified** – whether it came from a manufactured part, stock, a customer return, a purchased item discovered internally, or an engineering error
- **Where it showed up** – the specific operation (e.g., laser cutting, press brake, turning, milling, welding, paint, composite winding, assembly, receiving, shipping, product testing)
- **Which department owns the cost** – assembly cells for different mast families, fabrication centers, machining groups, paint, shipping/receiving, test, and more
- **What actually went wrong** – a reason code that describes the defect type in language operators understand
- **Why it went wrong** – a cause code that captures the root cause (operator, machine, tooling, program, drawing, material, handling, etc.)
- **What happens to the part** – disposition and MRB handling (rework, scrap, use-as-is, return to supplier, deviation/ waiver, hold for MRB, etc.), including where the part physically moves

All of these elements live in a single record, with attached photos, documents, and a conversation thread where participants discuss the issue. Inside Unifize, Internal NCRs can be viewed and filtered by operation, department, product family, disposition, root cause, or any combination of fields.



Purchased NCRs: closing the loop with suppliers

The Purchased NCR workflow is configured around supplier and receiving data. Each record includes:

- **Part, serial/lot information, and PO details**
- **Quantities received, inspected, rejected, and on hand**
- **A concise reason code (e.g., fails drawing/spec, dimensional error, surface defect, wrong/missing material, packaging error, shipment damage, shelf-life expired, functional/defective material)**
- **A description of the requirement and the actual condition observed**

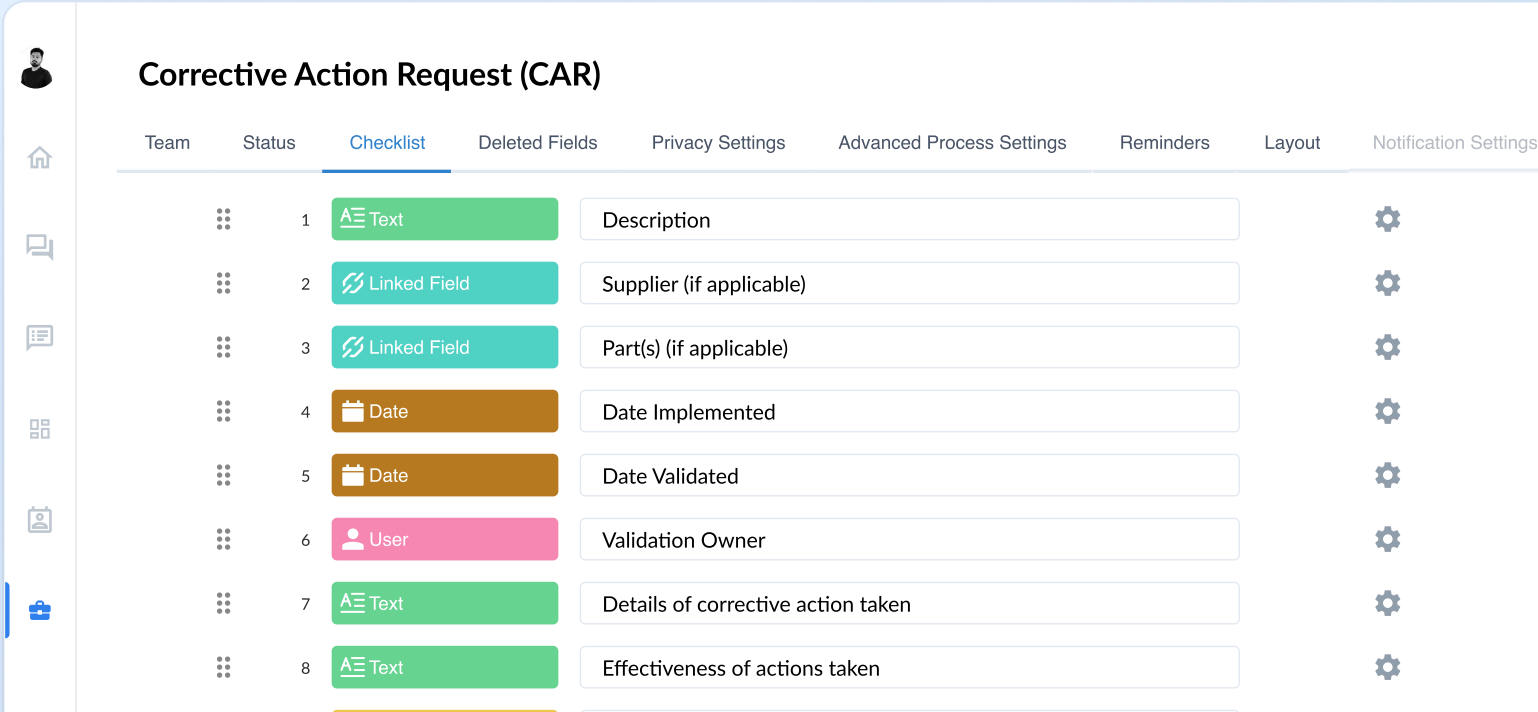
- **Disposition (return to supplier, rework, use-as-is, scrap) and MRB location, including options such as dedicated MRB zones or "RMA shipped directly to supplier".**
- **Containment actions such as inspecting remaining PO quantity, on-hand stock, WIP, or subassemblies built with the same lot**
- **Supplier and contact details, RMA/RGA numbers, and a finance section for unit cost, total NCR value, scrap/rework hours, and financial disposition**
- **Hooks to start supplier-side corrective actions (8D/CAR) and to log finance review and signoff**

Because Internal and Purchased NCRs share the same platform, they can be linked to each other, to customer complaints, to documents, to training items, and to corrective actions.

Corrective actions & root cause analysis

Will-Burt uses the CAR (Corrective Action Request) process in Unifize to track changes that arise from NCRs, VoCs, audits, and other findings. All CARs appear in a centralized list under Processes → CAR, with each entry showing:

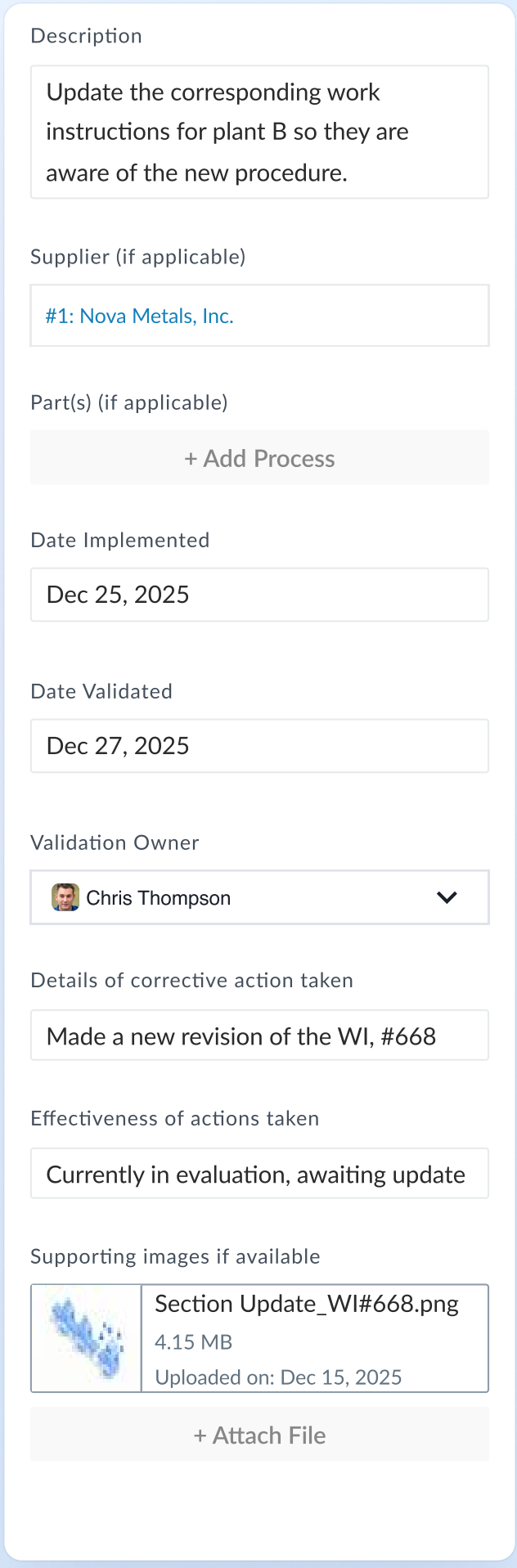
- A sequential **CAR number**
- A **short, action-oriented title** (e.g., "Upgrade Packaging," "Improve Gauge Management Process in Machining," "Create paint process sheet specific to this mast")
- **Status and Owner** columns
- Controls to create a **New CAR, customize the view, and toggle Show all revisions**



The CAR titles themselves reflect the range of work captured in this module, including:

- **Process and fixture changes**
  - Designing fixtures to prevent mis-loading
  - Building new fixtures capable of machining all holes in one setup
  - Running weld fixture maintenance programs
  - Modifying build and test processes to minimize risk of incorrect assembly
- **Inspection, gauging, and calibration updates**
  - Adding inspection operations for specific hardware
  - Updating final check sheets to include additional validation steps
  - Improving gauge management in machining
  - Verifying calibrated tools and updating calibration procedures
- **Documentation and standard work updates**
  - Updating and improving operating procedures and QMS documents
  - Removing obsolete documents
  - Updating routing instructions and acceptance test plans
  - Creating paint process sheets for specific masts
- **Training and awareness activities**
  - Conducting training on assembly processes
  - Holding quality stand-down meetings for machining
  - Providing training on gauge selection and packaging requirements
- **Supplier-related actions**
  - Adjusting inspection frequency for specific suppliers
  - Conducting tooling reviews or enhanced end-of-line testing for key customers or suppliers
  - Unapproving underperforming suppliers when needed

Each CAR record in Unifize includes fields for root cause, corrective and preventive actions, due dates, owners, reviewers, and completion details. Evidence such as updated documents, photos, and training records can be attached. CARs are linked back to the triggering NCRs, VoCs, or audit findings, and they appear on dashboards that show open, closed, and overdue items.



Supplier quality & scorecards

Supplier quality at Will-Burt is managed inside Unifize through a combination of supplier records, audits, assessments, NCRs, CARs, and performance dashboards.

Supplier records

Each supplier has a single master record that brings together:

- Supplier status and qualification level
- Commodities supplied and key capabilities
- Linked NCRs (Purchased), CARs, 8Ds, and assessments
- Audit results and attached documentation
- PO receipts and purchased returns
- Monthly performance statistics and charts

From this record, users can navigate directly to individual NCRs, CARs, or audits, or open dashboards showing the supplier's performance over time.

WILL-BURT

Scorecard - KABA MAS LLC

Name	KABA MAS LLC	**Scope of Approval**	Machined and assembled high-security locking components
Company Web Address	www.kaba-mas-fictitious.com	**Approved Commodity**	Electronic & Mechanical Locks
Primary Location Address	747 Corporate Dr, Lexington, KY 40503, USA	**Manufacturing Location(s) Address**	747 Corporate Dr, Lexington, KY 40503, USA

Month	Total Qty Received	Total Parts on Time	OTD%	Total Qty Rejected	Total PPM	12 months rolling OTD%	12 months rolling DPPM
2025 - 01 (January)	450	430	95.6	1	2222	88.5	3100
2025 - 02 (February)	480	460	95.8	2	4167	89.1	3200
2025 - 03 (March)	510	490	96.1	0	0	89.8	2900
2025 - 04 (April)	530	510	96.2	1	1887	90.5	2800
2025 - 05 (May)	550	535	97.3	0	0	91.2	2500
2025 - 06 (June)	580	560	96.6	2	3448	91.9	2700
2025 - 07 (July)	560	179	32.0	2	3571	92.1	2800
2025 - 07 (July)	590	575	97.5	0	0	92.8	2400
2025 - 08 (August)	610	595	97.5	1	1639	93.5	2300
2025 - 09 (September)	630	550	97.5	0	0	93.8	2300

Audits and assessments

Will-Burt uses Unifize to run structured:

- Supplier audits, covering areas such as calibration practices, preventative maintenance, counterfeit-part controls, shipping processes, and contamination prevention
- Capability and risk assessments that capture QMS certifications, capacity, delivery performance, and other risk factors

Findings from audits and assessments are logged as records in Unifize and can spawn CARs or be linked to existing NCRs.

Scorecards and metrics

Unifize calculates and displays supplier metrics such as:

- OTD% (On-Time Delivery)
- Rolling 12-month OTD
- PPM / DPPM and rolling trends
- Rejection counts and types
- Internal vs supplier-caused NCRs
- Shipment volumes

These metrics feed into supplier scorecards and dashboards, which can be opened at any time for business reviews. For example, tiles such as “Boville – Rolling DPPM%” show month-by-month bars for that supplier’s defect performance across multiple years.

Scorecards, NCRs, CARs, audits, and assessments all live in the same record, so purchasing and quality teams are working from the same set of data when they review suppliers, plan audits, or consider sourcing changes.

Linking NCRs and corrective actions

Every Purchased NCR is linked to the corresponding supplier. When a defect occurs, Unifize connects:

- The incoming inspection record
- The NCR
- Any related CARs or 8Ds
- Relevant audit findings
- The supplier’s monthly performance metrics

This creates a complete digital thread from a specific incident all the way through to long-term supplier performance and follow-up actions.

Dashboards & real-time visibility

Unifize's dashboards give Will-Burt a live view of quality and supplier data without manual report building. As users log NCRs, VoCs, supplier issues, inspections, and actions, the dashboards update automatically.

Management review dashboards

For management reviews, Will-Burt uses dashboards that track:

- VoCs by customer
- VoCs by status (open/closed) and lists of open VoCs
- Internal NCRs by owner and by reason code
- Open internal NCRs
- Purchased NCRs by supplier and by reason code
- Open supplier NCRs
- Monthly trends for:
  - Internal NCR counts
  - Scrap cost
  - Rework cost
  - Internal NCRs by department charged
  - VoCs by complaint code

These dashboards are used during review meetings as the primary reference for what is happening across internal quality, customer feedback, and supplier performance.

Operational dashboards

Additional dashboards focus on:

- Supplier performance metrics (OTD, rolling OTD, DPPM, rejection counts)
- Audit findings and open actions
- Training completion and certification status
- Safety and EHS metrics

Users can drill into charts to open the underlying Unifize records (NCRs, CARs, VoCs, audits, etc.), keeping analysis and follow-up in the same environment where the data is captured.

Together, the NCR workflows, CAR process, supplier records, scorecards, and dashboards describe how Will-Burt runs its quality system day-to-day inside Unifize.

Implementation Journey

Mapped processes & identified fragmentation

The team reviewed how quality, supplier, and customer workflows actually operated across spreadsheets, Access tools, shared drives, and email to pinpoint where delays and inconsistencies originated.

Prioritized modules based on operational impact

Modules handling the highest-volume and highest-risk activities - internal NCRs, supplier NCRs, VoC, document control, and change control - were selected as the starting point.

Built real workflows in Unifize

Unifize recreated Will-Burt's existing routing, categorization, and approval steps inside the platform so teams could transition without changing how they work.

Migrated supplier, quality, and document data

Key records - supplier lists, NCR histories, documents, and revision trails - were cleaned, standardized, and brought into a single system.

Trained superusers & piloted workflows

Quality leads and cross-functional champions tested workflows with real cases, refining templates and routing logic before full rollout.

Rolled out a unified quality system

All users shifted away from legacy tools and began logging NCRs, complaints, inspections, and changes directly in Unifize.

Connected supplier, internal, and customer workflows

Internal NCRs, supplier issues, incoming inspections, and VoCs were linked so teams could see the entire chain of cause and effect in one place.

Built dashboards for management & suppliers

Live dashboards and scorecards replaced manual reporting, giving leadership and procurement real-time visibility into trends and performance.

Expanded into Safety and Training

Training records, certifications, and safety incidents were digitized and integrated, allowing workforce readiness and EHS data to feed into continuous improvement.

Enabled remote audits & stronger compliance

With complete traceability and controlled access to records, Will-Burt began conducting up to 90–95% of audits remotely and documenting compliance more easily.

Shifted into continuous improvement mode

As usage increased, teams iterated and expanded workflows, making Unifize the backbone of ongoing process refinement and operational visibility.

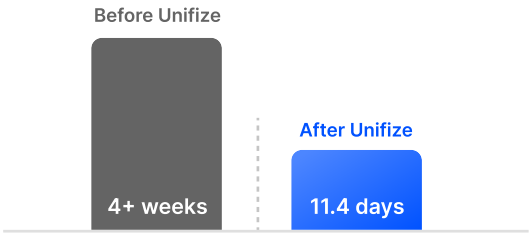
Results achieved

The impact of Unifize at The Will-Burt Company was felt quickly. What began as a shift to a new system soon yielded measurable gains in efficiency, collaboration, and culture.

Internal Nonconformance Closure Time

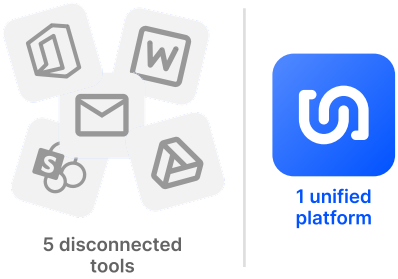
75% faster closure

Customer Complaint (VoC) Closure Time



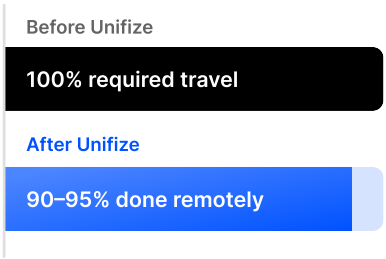
60% faster response

Quality Systems



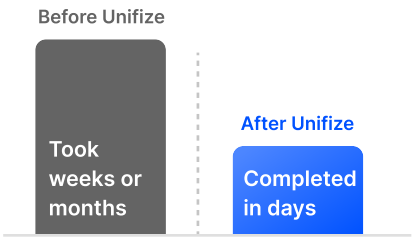
100% consolidation

Internal Audits



Significant time & cost savings

Task Completion



Significant productivity gain

Cultural impact

Beyond the numbers, Will-Burt saw real cultural and operational change.

Improved accountability and ownership

Every issue now has a clear owner and visible progress.

Better collaboration

Cross-functional conversations happen in real time, not in long email chains.

Increased visibility

Leadership can instantly see trends and act proactively rather than reactively.

Higher engagement

Teams feel empowered to contribute ideas and improvements.

Greater agility

Problems are solved faster, and decisions are made with full context.

Customer confidence

Faster closures and transparent communication strengthened relationships.

Moving Forward

The Will-Burt Company's work with Unifize marks the start of a much larger shift toward smarter, more connected operations. With a unified platform now in place - one that ties together quality, safety, supplier management, and everyday collaboration - the team finally has a solid foundation to build on.

Next, Will-Burt plans to deepen this foundation. The focus is on expanding analytics, connecting supplier quality and production data in more meaningful ways, and refining workflows as the business evolves. The goal is straightforward: make continuous improvement part of the daily routine rather than something revisited only during audits or reviews.

More importantly, Unifize has reshaped the organization's approach to quality. It's no longer a single department or a checklist of compliance tasks. It's part of every discussion, every decision, and every handoff across the company. The shift has been from chasing information to sharing it instantly, and from reacting to issues to preventing them before they reach the floor or the field.

As Will-Burt moves forward, one thing is clear: connected quality isn't just improving how the team works today. It's influencing how the company will grow in the years ahead.