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WHITE PAPER
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COMPLIHUB — AUTOMOTIVE CORE TOOLS

From spreadsheets to certifiable evidence: running IATF 16949 on one platform.

Why the Process Flow Diagram, PFMEA, Control Plan and Contingency Plan your team already maintains are safer, faster to update and easier to defend in an audit when they live in one connected system, and how the clauses around them, from the quality manual to calibration findings that reach the customer, follow from the same records.

IATF 16949:2016 AIAG Core Tools AIAG/VDA FMEA 2019 ISO 9001:2015

Prepared for your evaluation of the CompliHub Automotive Core Tools module. · Every capability described here is built and working in the current release, not a roadmap item. The clauses only partly covered are named in Section 9.

SECTION 1

Executive summary

The four documents an IATF 16949 auditor asks for on a walk-through of any part — the Process Flow Diagram, the Process FMEA, the Control Plan, and where the part or the site carries production-interruption risk, a Contingency Plan — are usually built and maintained the same way almost everywhere: as spreadsheets, each its own file, each keeping its own revision history in a header cell, and each trusting a human being to remember to update the other three whenever one of them changes.

That approach works. It is also the reason a fortnight of preparation precedes every surveillance audit: confirming that operation “70A” means the same thing on the PFD, the PFMEA and the Control Plan; recomputing an RPN that was typed rather than calculated; and reconstructing, from memory or an email thread, who actually approved the revision that is now in use on the shop floor.

This paper sets out, plainly, what changes when those four documents are built and kept on one platform instead: every operation is a single row an FMEA and a Control Plan can both point at, every risk score is computed and never mistyped, every approval carries a name, a timestamp and a stated meaning that cannot be edited after the fact, and an approved revision cannot be silently changed — only superseded by a new one, with the old one kept on file. None of this asks anyone to work differently. It asks the software to stop trusting people to keep four files in agreement, which is a task no amount of diligence makes reliable forever.

1
Shared step register instead of four disagreeing files

0
Hand-typed RPN, Cpk or Class values

100%
Approvals with a named signer, timestamp and reason

13
AIAG/IATF tools on one connected register

92 / 104
IATF supplemental clauses covered in full

The core tools are where most suppliers start, and they are not where an audit ends. The same records feed the clauses around them: a work instruction revision raises a training need, a gauge found out of tolerance asks whether product has shipped, a customer specification change is sent to the people it affects, and the quality manual is assembled from the scope, processes and customer requirements already in the system. Rated clause by clause against IATF 16949, 92 of 104 supplemental clauses are covered in full, 10 are partial and 2 are procedural. Sections 6 to 9 set out what that means, and where it stops.

This document does not claim the platform makes your quality management system compliant — certification is granted to your organization, never to any piece of software. What it claims, and demonstrates line by line, is that the evidence an IATF auditor is trained to look for is a by-product of using the system correctly, rather than a separate exercise your team performs before every audit.

SECTION 2

What four spreadsheets actually cost you

None of what follows is a criticism of how these documents are currently built. A Process Flow Diagram, a PFMEA, a Control Plan and a Contingency Plan built in a spreadsheet are genuinely AIAG-compliant in shape — the columns are right, the legend is right, the logic of Severity × Occurrence × Detection is right. The cost is not in the content. It is in what a spreadsheet cannot do that the document format quietly assumes someone will do by hand.

WHAT A SPREADSHEET CANNOT ENFORCE

- Operation “70A” on the PFD, the PFMEA and the Control Plan is three typed cells that happen to agree today — nothing stops one file drifting from the other two after the next revision.
- The RPN, the Class (C/M/S/Mi/#) and the capability index are formulas a person can overwrite, delete, or copy down incorrectly across a merged row.
- A merged cell repeats an Operation No., Failure Mode or Effect across several causes — readable to a person, but there is no way to query “every cause under this operation” without opening the file.
- An approval is an email, a scanned signature, or an initial in a header cell — with no record of what the approver actually saw at the moment they approved it.
- A revision is a new tab, a new filename, or a tracked-changes history that stops being reliable the moment two people edit different copies at once.
- A Contingency Plan's own test-and-review clock is a date typed in a cell — nothing flags an untested plan as overdue until someone remembers to look.

WHAT THE PLATFORM ENFORCES INSTEAD

- Operation “70A” is one row on the Process Flow Diagram. The PFMEA row and the Control Plan row that address it each hold a picker scoped to that diagram's own steps — the same database row, not three places that happen to agree on spelling.
- RPN, Action Priority, Class, Cp/Cpk/Pp/Ppk and Gage R&R are all computed the instant the underlying scores are saved. There is no cell to overwrite.
- Every worksheet row stands alone and is fully typed — no merged-cell convention, so every cause under an operation is a real, individually queryable row.
- An approval carries the signer's name and title as they stood at signing time, a server-set timestamp, and one of five declared meanings (authorship, review, approval, verification, responsibility) — frozen onto the record, not re-writable later.
- An approved FMEA, Control Plan or PFD is immutable. A change is made in a new draft, and the superseded one stays on the register as what the analysis actually said before the change, not a tab someone might have edited by mistake.
- A Contingency Plan that has never been tested reads as **overdue immediately** — not merely pending — the moment it goes live, and the annual review clock is stored, not remembered.

THE FAILURE THIS ACTUALLY PRODUCES

The most common audit finding against a well-run automotive supplier is not that the analysis was wrong. It is that the analysis *cannot be shown to be the one currently in force*: the PFMEA on the shared drive has a later date than the Control Plan that supposedly derives from it, or the recommended action column names a completion date that passed eighteen months ago with nothing recorded against it. That is not a quality problem. It is a record-keeping problem, and it is the one this paper is about.

SECTION 3

What an IATF auditor actually checks

An IATF 16949 auditor working the core tools does not read a PFMEA in isolation. The method — and VDA 6.3's process audit follows the same logic — is to trace one part or one operation through every document that touches it, and confirm the story holds together at every step.

The auditor's question	What a spreadsheet-based answer looks like	What this platform's answer looks like
“Show me where this failure mode is controlled.”	Cross-reference an operation number by eye across two open files, hoping the wording matches.	Open the FMEA row; its **PFD Step** link and the Control Plan rows that reference the same **FMEA Item** are shown directly on the record.
“How was this RPN calculated?”	Trust that S × O × D was multiplied correctly and not overwritten since.	RPN and AIAG/VDA 2019 Action Priority are computed at save time from the current S/O/D and cannot be typed over.
“Who approved this revision, and when?”	An email thread, a scanned signature page, or an initial with no stated date.	A named approver, a server timestamp, and a declared signature meaning — visible in the Approval History panel on the record itself.
“Is this the current revision?”	Whichever file has the most recent “Rev.” typed in the header, and hope nobody is working from an older copy.	An approved record is the only one marked current; a superseded revision is kept, clearly marked, never silently edited.
“Every row on the Control Plan has a reaction plan?”	Scan every row by eye for a blank cell.	The system refuses to save a row with a control method and no reaction plan — there is no way for the gap to exist on a saved record.
“When was this contingency plan last tested and reviewed?”	A date typed in a cell, current only if someone remembered to update it.	Test readiness (overdue / due soon / current) and the annual review clock are derived from the plan's own test and review history, never hand-set.
“Was this developed by a cross-functional team, or one engineer?”	A list of names typed in a header cell, with no way to confirm who actually contributed.	A visible team roster recorded against the analysis itself, with each member's role.

The auditor's question	What a spreadsheet-based answer looks like	What this platform's answer looks like
“How long do you keep this FMEA, Control Plan and PPAP record?”	Whatever a shared drive's own folder policy happens to be — usually undocumented and never enforced.	Every one of the eight core-tool record types carries its own seeded retention period and an archive-then-dispose trail, so the record cannot be deleted before its time is up.
“This corrective action — which FMEA or Control Plan did it actually change?”	A CAPA closure note describing, in prose, that “the PFMEA was updated” — with no link to the revision it produced.	A CAPA action can name the exact FMEA, Control Plan row or SPC study it resulted in, so the corrective action and the record it changed are one trail, not two that have to be reconciled by reading both.

Every row above maps to a specific, working capability in the current release — not a claim about a future one. The clause-by-clause detail behind each is available to your evaluation team in the product's own maintained mapping documents, including the sections where coverage is declared partial rather than complete.

SECTION 4

One connected toolkit, not four separate files

The four documents this paper opened with are the ones every part carries. They are not the only ones IATF 16949 and the AIAG core tools ask for, and the platform does not treat them as separate products bolted together — every one of the thirteen tools below shares the same approval engine, the same audit trail, and, where the AIAG methodology calls for it, the same linked step register.

Tool	What it holds, and how it connects to the rest
Special Characteristics	The register that ties a customer's drawing symbol to the FMEA row, Control Plan row and Product Safety plan that all have to treat that feature with extra care.
Process Flow Diagram	The ordered, numbered sequence of operations for a part — the shared step register the PFMEA and Control Plan both link back to.
FMEA (Design & Process)	Severity/Occurrence/Detection scoring with AIAG/VDA 2019 Action Priority, a named cross-functional team, and recommended actions tracked with a revised score once taken.
Control Plan	Process step, characteristic, specification, sample size/frequency, control method and a required reaction plan — with row-level links to the FMEA item and special characteristic it addresses.
PPAP	The full 18-element AIAG checklist, seeded automatically, with the customer's own approval/interim/rejection decision recorded directly since that decision belongs to them, not to anyone with a login here.
SPC	All six AIAG chart types, with control limits and Cp/Cpk/Pp/Ppk computed from a frozen baseline — every later reading judged against that baseline, never against today's running average.
MSA	Crossed Gage R&R via the AIAG Average and Range method: EV/AV/GRR/PV, %GRR and number of distinct categories, checked against the AIAG manual's own worked example.

Tool	What it holds, and how it connects to the rest
APQP	AIAG's own five phases as a hard-gated launch project; a phase cannot advance until every required deliverable behind it is actually complete, with the deliverable linking the real FMEA, Control Plan, PPAP, SPC or MSA record as its evidence.
Error-Proofing	A specific installed poka-yoke device linked to the failure mode it guards and the Control Plan row that names it, with a periodic test-for-failure history and a required reaction the moment a test fails.
Warranty Management	The field return, its analysis outcome — including “No Trouble Found” kept on file as its own case, not a claim that disappears — and a direct route into corrective action for a confirmed defect.
Product Safety Management	Which characteristics on a part are safety-related, which FMEA and Control Plan revision carries the special approval, and an escape/near-miss log with a recorded customer-notification decision.
Contingency Plans	A documented plan per production-interruption risk, with test readiness that reads a never-tested plan as immediately overdue and a stored annual-review clock.
TPM & Production Tooling	A planned-maintenance system per piece of equipment, and a tooling register tracking tool life by cycle count against a limit — a derived state, never hand-set.

THE POINT OF BUILDING ALL THIRTEEN ON ONE PLATFORM

A PFMEA that links to the same Process Flow step as the Control Plan it feeds, whose failure mode is guarded by a specific Error-Proofing device, whose part carries a Special Characteristic that a Product Safety plan tracks — that is one evidence trail an auditor can follow from a drawing symbol to a customer submission, in the same system, without a single cross-reference that depends on two file names staying in sync by luck.

SECTION 5

What changes on the day the auditor arrives

The value of any of this is not theoretical. It shows up in three concrete ways during an actual surveillance or certification audit.

The preparation fortnight shrinks to a review, not a reconstruction. Instead of opening four files and hoping they still agree, the team confirms that what the system already shows — the linked PFD step, the current approved Control Plan revision, the open recommended actions — is what they expect to see. Nothing has to be rebuilt from memory, because nothing was ever only in memory.

A repeat finding stops recurring for the reason it usually recurs. The most common reason a corrective action reappears at the next audit is that it closed on a date rather than on verified evidence that the fix worked. An FMEA's recommended action, a Control Plan's reaction plan, and an Error-Proofing device's own reaction record all require the same thing this system enforces everywhere else: a stated action, tied to a person and a date, that stays visibly open until someone records it was actually done.

A question about “who approved this” has one answer, not a search. Every approval — on the FMEA, the Control Plan, the PPAP submission, the Process Flow Diagram — is answered from the Approval History panel on the record itself: a name, a timestamp, and a declared meaning, in the order the approvals actually happened. There is no second place to look, and no version of the answer that depends on which inbox still has the email.

WHAT STAYS EXACTLY THE SAME

The engineering does not change. The same people score Severity, Occurrence and Detection; the same cross-functional team develops the PFMEA; the same reaction plan gets written for a Control Plan row that goes out of spec. What changes is only what happens to that judgment once it is entered — it is computed instead of typed, linked instead of cross-referenced by eye, and kept instead of overwritten.

SECTION 6

Beyond the core tools: the clauses around them

An IATF 16949 audit does not stop at the six core tools. It follows a part into the work instruction at the station, the gauge that measures it, the people trained to run it, the supplier that provides the material and the review that management holds afterwards. The platform is mapped against each supplemental clause of the standard, with a status and, where the status is not complete, what is missing. The table below is generated from that mapping when this paper is built, so it cannot drift from it.

IATF 16949 section	Clauses rated	Covered	Partial	Procedural
Clause 4: Context of the organization	4	4	0	0
Clause 5: Leadership	5	4	0	1
Clause 6: Planning	4	4	0	0
Clause 7: Support	15	13	2	0
Clause 8: Operation	59	51	7	1
Clause 9: Performance evaluation	12	11	1	0
Clause 10: Improvement	5	5	0	0
Total	**104**	**92**	**10**	**2**

Covered means the system holds the record the clause asks for, with the workflow and evidence an auditor would expect. **Partial** means part of it is there and the mapping says exactly what is missing. **Procedural** means a written policy or a manual activity that software cannot supply. None of the three means certified.

The groups that follow are arranged the way an auditor walks the standard. Each ends with what it does not do, because that is the question an evaluation team asks next.

Quality Manual, Scope and Exclusions IATF 16949 §4.3.1, §5.1.1.3, §7.5.1.1

The scope of the quality management system, the exclusions claimed and the way the processes connect, assembled into a printable manual that cannot disagree with the records behind it.

- Each supporting function (design, purchasing, logistics, laboratory, maintenance, customer service, IT) is recorded with what it does for the site, where it is done and who is responsible, and a function left out of scope has to say why
- The usual functions nobody has considered are listed, and an entry not reviewed within its interval is flagged
- An exclusion states why it does not apply and why product conformity is not affected, is approved by someone other than its owner, and for IATF 16949 only product design and development (8.3) can be excluded
- Each process has an owner, a deputy, inputs, outputs and indicators, and the handovers between processes are recorded

- The Quality Manual page assembles scope, exclusions, processes, interactions and where each customer requirement is addressed, lists its own gaps and prints cleanly
- The manual is assembled from records and does not hold the quality policy or the documented procedures, and the interactions are listed and not drawn

Responsibilities, Conformity and Production Stop IATF 16949 §4.4.1.1, §5.3.1, §5.3.2

Who is responsible for customer requirements, special characteristics, product safety and corrective action, the confirmation that a part conforms, and the authority to stop production.

- Top management assigns each of these responsibilities to a person with a deputy, and one nobody holds shows as unassigned on the lists it affects
- A conformity confirmation for a part cannot be signed while an applicable customer requirement is a gap or not assessed, while its control plan is not approved, or if a regulatory check does not say the product conforms
- The confirmation is signed by someone other than its preparer, is valid for twelve months and then shows as expired
- A person with stop authority can order production stopped at a work centre. While the order stands no scheduled job starts there, and quality releases it only after a restart verification has been approved
- A stop order stops new jobs being started in the system and cannot stop a machine that is already running

Facilities, Housekeeping and Environment IATF 16949 §7.1.3.1, §7.1.4.1

The plan for a layout or equipment change, and a scored housekeeping record for each production area.

- A facility plan names the multidisciplinary team, material flow, use of floor space, risks, lean considerations and contingency, and is approved by a second person and verified for effectiveness once built
- Material flow is written as steps (from, to, material, metres, trips per day, handling) and the plan adds up the distance travelled and the moves per day, so two layouts can be compared
- An approved change request raises a draft plan, once
- A 5S audit scores sort, set in order, shine, standardize and sustain, and needs findings and an action date below 80% or when any element scores 0 or 1
- Temperature, humidity, cleanliness and ESD are monitored conditions with limits and readings
- Layouts are not modelled, and the monitored conditions are not tied to the 5S audit of the same area

Work Instructions, Set-up and Restart Verification IATF 16949 §8.5.1.2, §8.5.1.3, §8.5.1.4, §8.5.1.7

Standardized work at each workstation, and the check that a job set-up or a restart after a shutdown is right before production runs.

- An instruction carries the safety rules, steps and visual standard, is linked to the process step and control plan, is approved by a second person and cannot be edited once approved
- Approving a revision makes the one before it obsolete, so only one is in force for a code, and a By workstation page shows what is in force at a station
- An instruction can name the competency it needs. Whoever records a set-up against it must hold that competency today

- A set-up or restart verification records parameters, first-off and last-off results, needs a passing first-off part and a different person, and a rejected attempt stays on file
- A scheduled job cannot start on a line without an approved verification for the part
- The schedule has no finite-capacity calculation and does not import customer orders

Measurement, Calibration and Laboratories IATF 16949 §7.1.5.1.1, §7.1.5.2.1, §7.1.5.3.1, §7.1.5.3.2, §9.1.1.2

Whether a gauge can be trusted, what happened when one was found out of tolerance, and what the laboratory clauses need from your laboratory system.

- A control plan row that is checked by SPC or on every piece, and names a measurement method, is flagged when no live MSA study exists
- Evaluating an out-of-tolerance calibration has to say whether product already shipped was not affected, possibly affected or affected
- For the last two the asset page keeps asking until the customer, the date and a reference to the notice are recorded
- An MSA study that comes out marginal or unacceptable asks for a written review of the acceptance criteria and the method, or why nothing changes
- Furnace accuracy tests and temperature uniformity surveys are recorded as calibration kinds
- The customer notice is recorded and not sent, and shipped lots are not listed automatically
- Internal and external laboratory clauses depend on your laboratory system. The requirements are written for its team, and results do not yet carry a scope status

Competence, Awareness and Motivation IATF 16949 §7.2.1, §7.2.2, §7.2.3, §7.2.4, §7.3.1, §7.3.2

How training needs are found, how competence is proved and how people are made aware of quality, beyond a training matrix.

- A new work instruction revision that names a competency, a later control plan revision and a reviewed customer specification change each raise a training need with an owner and a due date
- A need stays open until it is met, with how, or shown not to be needed, with why, and is flagged when overdue
- On-the-job training has a named mentor, only the mentor can sign off, and signing off grants the competency
- Internal and second-party auditors are held to stated criteria, and a rule that only a currently qualified auditor can be assigned can be switched on
- Awareness topics are tagged on training sessions, and a coverage page shows who has not been reached in twelve months
- Awareness campaigns, quality recognition nominations and survey results are recorded, and a nomination is decided by someone who is neither the nominee nor the nominator
- A competency is checked at set-up verification and area fitness clearance, and not at every other task assignment. The system holds survey results and does not run a survey

Risk, Preventive Action and Planning IATF 16949 §6.1.2.1, §6.1.2.2, §6.2.2.1, §8.1.1

Risks that feed the system from real data, preventive action as its own record, and the inputs a launch is planned from.

- A lessons-learned review takes the counts of warranty claims, field failures, recalls, findings and customer disruptions from the system and keeps the lessons and the risks raised with the review
- A preventive action records where the potential problem came from, an owner and a due date, and either links an error-proofing device or says why none applies
- A quality objective says which customer requirement it addresses, and top management records a review of it
- An APQP project tracks each planning input (customer requirements, specifications, logistics, feasibility, timing, resources) and cannot leave its first phase on an open one
- Rules such as a contingency plan for high risks, and every kind of planning input before the first gate, are off until a super admin switches them on

Design and Development Controls IATF 16949 §8.3.1.1 to §8.3.6.1, §8.6.2, §8.6.3

The controls around product design that an automotive customer expects, tied to the APQP project.

- Design inputs are recorded by category and each of the eight target categories must be covered, or marked as not applying, before a design project is submitted
- Design tools and the level of skill required are registered, people are assessed, and a project shows any skill its owner does not meet
- Each design output is assessed for special characteristics before the project is submitted
- Verification and validation are separate records, and a validation names the customer programme date and the failure modes tested
- A prototype build is planned against the customer's deadline and recorded with the measured results by characteristic
- Layout inspection results are kept dimension by dimension and a dimension outside its limits cannot sit under a pass
- An appearance master records the lighting and conditions it is judged under and the customer's approval
- Software in the product has a process assessment, a required and assessed level and recorded test runs. Requirements traceability and the test results stay in the team's own tools

Operational Controls and Release IATF 16949 §8.5.2.1, §8.5.3, §8.5.4.1, §8.5.6.1.1, §8.6.1, §8.6.4, §8.6.6

The controls on the shop floor between a customer order and a shipped lot.

- A traceability plan per part records the level of identification and how status is shown, and a timed trace exercise passes only if both the time and the pieces located are met
- Customer property is recorded with its condition and checked at an interval
- Storage areas are assessed for deterioration at an interval, with overdue assessments flagged
- An alternate process control records why it gives equivalent assurance and the longest it may stay in use, and its use is logged and reviewed
- A release starts with one line per control plan item and is released by someone other than its preparer, only when every line is completed or the customer's approval is recorded
- The method that assures a supplier's product is recorded per supplier and per material

- An attribute sampling plan gives the sample size for the lot, and an inspection that found a nonconforming piece needs the customer's approved acceptance level
- Traceability that the system can walk exists only for material lots and production batches, and for finished goods and work in process the rotation rule is written and not enforced

Change Control and Customer Specifications IATF 16949 §8.3.6.1, §8.5.6.1, §7.5.3.2.2

Changes to the product or process, and changes a customer makes to its own standards, followed through to the people and documents they affect.

- A change records where it came from (internal, customer, supplier, regulator), whether the customer must approve the part again and whether it needs a trial run
- A change decided as needing a PPAP raises the submission from the approved request and cannot be closed until the customer has approved it
- A customer specification revision is logged on receipt, and working days to review and to production are counted against the target on the record
- The change is sent to the affected functions, each recipient acknowledges it, and the updated documents are linked
- A super admin can require that distribution, acknowledgement and an updated document exist before a change is recorded as in production. The rule is off by default
- Nobody is notified that a copy is waiting

Supplier Controls Beyond the Scorecard IATF 16949 §8.4.1.1 to §8.4.3.1

The controls on what suppliers supply, from selection to second-party audit, and the software they supply.

- A supplier is scored on financial viability, quality system, technical capability and delivery, with a written supply risk assessment, and is approved outright only if every criterion reaches 3 and the risk is not high
- A declaration of conformity to a regulation or substance list is held against the supplier and the material, and a rule that a regulated lot cannot be received without one can be switched on
- Requirements passed to a supplier are recorded with the supplier's acknowledgement, and a suggestions page lists the safety and regulatory characteristics not yet passed on
- Customer-directed sources are recorded with who is responsible for quality
- Approved suppliers are ranked for audit by risk, inspection level, time since the last audit, certificate state, incidents and open nonconformances, and a draft audit programme can be filled in that order
- Supplied software carries the same process assessment as in-house software, ranked by overdue assessment
- Development plans have dated milestones with evidence of improvement

Performance Measures and Customer Performance IATF 16949 §5.1.1.2, §8.2.1.1, §9.1.1.1, §9.1.2.1, §9.1.3.1

The plant-level figures and the customer's own view of you, worked out from the records the system already holds.

- Manufacturing Metrics works out PPM, first-pass yield, scrap rate, scorecard rating, jobs completed by the due date, OEE and DPMO by month, and a month with nothing to measure shows a dash and not zero

- A performance measure can take its monthly reading from those figures instead of a typed number, with a target and a direction
- One page per customer shows the last twelve months of on-time delivery, disruptions with cost, warranty claims, returns, notices and the customer's scorecard
- Trends are scored, ranked and tied to the objective they threaten, and a suggestions page lists trends the data shows that nobody has taken up
- Customer communication is logged with a reply-due date and an overdue flag
- OEE exists only where production runs are entered, DPMO only for inspections that state opportunities and defects, and nothing is received from customer portals or EDI

Inspection, SPC and the Corrective Action Loop IATF 16949 §8.5.1.1, §8.6.2, §8.7, §9.1.1.1, §10.2.3, §10.2.6

Readings judged against the control plan, fed into SPC, and failures and complaints taken into corrective action, with each automatic step opt-in.

- A control plan row can carry numeric limits, a nominal and a unit. An inspection against the plan takes its limits from the row, so a line can be just the characteristic and the reading
- Each reading is judged in or out of tolerance as it is entered, and a dimension outside its limits cannot sit under a pass for any kind of inspection
- Readings against a row that has a live variable SPC study of the same subgroup size are recorded in it as one subgroup, so they are not typed twice
- When the FMEA a control plan was built from is superseded, or a newer one exists for the part, the plan says so, its owner is told, and a button drafts the next revision against the current FMEA with each row's FMEA item found again. A site rule can stop a stale plan being submitted for review
- A complaint, a warranty claim with a confirmed defect, a finding or a nonconformance can start an 8D with the problem carried across. A site rule can raise the finding and a draft 8D when the analysis is recorded
- A site rule can raise a nonconformance when an inspection fails, which holds the lot it names and starts the disposition, rework and corrective action steps
- Nothing revises a control plan by itself, a production batch is not held by an inspection, and the 8D's steps are not linked to the finding's root cause analysis and corrective action plan

Internal Audits, Management Review and Improvement IATF 16949 §9.2.2.1 to §9.2.2.4, §9.3.1.1, §9.3.2.1, §9.3.3.1, §10.2.3, §10.3.1

The audit programme, the review that follows it, and the improvement work that results.

- Every QMS process is shown with its last audit and flagged when not audited within three years, and a draft programme can be filled in for the processes not covered
- A manufacturing process audit uses the organisation's own question set, each question rated, with a finding raised into corrective action
- A product audit plan per part family calculates the next due date, and its interval is halved while the last audit failed or complaints and claims exist on the part
- A management review adds the IATF inputs with figures worked out from the records, and the next review falls due after twelve months or three while an active customer measure is off target

- A site rule can stop a review closing until each IATF input is on the agenda and every customer measure that is off target has an action
- An 8D report is worked in order and closed by someone other than the team leader
- An improvement project records the method, the metric with its baseline and target and the result
- The interval of a recurring planned audit does not change by itself when problems occur, and no published question catalogue such as VDA 6.3 is included

SECTION 7

Five trails an auditor can follow without leaving the system

The test of connected records is whether an auditor can start at one and arrive at the others without a cross-reference typed by hand. These are five trails the platform supports, each of which would otherwise run through several files and an inbox.

Trail	What happens, in order
A customer changes a specification	The revision is logged on receipt with a target in working days. Recording its review raises a training need. It is sent to each affected function, a named person in each acknowledges it, and the controlled documents that were updated are linked to it. A change is only then recorded as in production. The last step can be made a rule, and is off until a super admin switches it on.
A gauge is found out of tolerance	The calibration is recorded as failed or adjusted and the asset is flagged. The impact evaluation has to say whether product already shipped was not affected, possibly affected or affected. For the last two the asset page keeps asking until the customer, the date and the reference to the notice are recorded. If the gauge was also qualified by an MSA study that came out marginal, that study asks for a written review of the acceptance criteria.
A change is made on the line	The change request records where it came from and whether the part needs the customer to approve it again. If it does, the PPAP resubmission is raised from the approved request and the change cannot close until the customer has approved it. An approved change can also raise a facility plan. A new work instruction revision that names a competency raises a training need, and the next set-up on that instruction needs someone who holds the competency.
A supplier starts to slip	Goods receipts carry the date that was expected. The scorecard works out lot rejection, PPM per unit, open nonconformances, incidents with their cost and the share of receipts on time. It recommends an inspection level by a stated rule, and a tightened level books every lot from that supplier into quarantine. The same data ranks the supplier for a second-party audit, and a draft audit programme can be filled in that order.
A complaint reaches the management review	The complaint is logged with the customer's reference and reply deadline. Analysis can raise a finding into corrective action with one click, or automatically if the site has switched that on, and an 8D report can be started from the complaint with the problem carried across. The 8D is worked in order and closed by someone other than the team leader. A corrective action can name the FMEA, Control Plan row or SPC study it changed. The customer's performance page shows twelve months of delivery, disruptions, claims and scorecard, and the management review opens with those figures already in it.

WHAT THIS SAVES IN PRACTICE

None of these trails depends on someone remembering to start the next step. Each step is a record that the previous one points at, so the question an auditor asks at the end of the trail is answered by following the links backwards. Where a step is still manual, such as sending the customer the notice, the system records that it was done and keeps asking until it is.

SECTION 8

Controls you switch on, and when

A rule that stops work is only welcome once a plant is ready for it. Where a control would change how a site already operates, it ships off. A super admin switches it on, one site setting at a time, when the data behind it is in place. Seventeen controls work this way. Anything the data already implies, such as the second person who must approve, applies from the start.

Control	What it stops once it is on
Contract review before launch	An APQP project cannot start without an approved contract review.
Planning inputs before the first gate	An APQP project cannot leave its first phase until each kind of planning input has an entry.
IATF inputs before a review closes	A management review cannot close until each IATF input is on the agenda and every off-target customer measure has an action.
Qualified auditors only	Only a currently qualified auditor can be assigned to an internal audit, and a supplier audit needs a second-party qualification.
PPAP decision before a change is approved	A change cannot go for approval until someone records whether it needs a PPAP resubmission.
Competent owner for SPC and MSA	A new study can only be given to someone who currently holds a competency marked as covering statistical tools.
Customer link on quality objectives	An objective cannot be activated until it names the customer requirement it addresses.
Contingency plan for high risks	A risk scored 15 or more cannot move to treatment until a live contingency plan names it.
Skilled owner for design projects	A design project cannot start until its owner meets the level required for each skill the project lists.
Passing test run for product software	A software record cannot be approved until its latest test run passed.
Release before despatch	A lot cannot be despatched unless a product release that names it has been released.
Declaration before receiving a regulated material	A lot of a flagged material cannot be received from a supplier that holds no current declaration covering it.
Regulatory check before release	A product release cannot be released until a regulatory check naming its lot says the product conforms.
Distribution before a specification change is in production	A customer specification change cannot be recorded as in production until it has been sent, acknowledged and has an updated document linked.
Current FMEA before a control plan goes for approval	A control plan cannot be submitted for review while its FMEA is superseded or a newer one exists for the part.
Corrective action raised by a complaint analysis	Not a stop but an action: recording the analysis of a field failure, or of a warranty claim that confirms a defect, raises the finding and a draft 8D.

Control	What it stops once it is on
Nonconformance raised by a failed inspection	Not a stop but an action: a failed inspection raises a nonconforming output, which holds the released lot it names.

Not every rule is optional. A scheduled job cannot start on a line without an approved set-up verification for the part, a flagged material cannot be released without a conformity check, and an approved FMEA, Control Plan or Process Flow cannot be edited. Those apply from the first day.

SECTION 9

What this platform does not claim to do

IATF 16949 is a supplement to ISO 9001:2015 that adds automotive-specific clauses. The platform is built against the six AIAG/VDA core tools and the Control Plan, and every IATF-specific clause in our maintained mapping has a module behind it. That is not the same as every clause being complete: in the current mapping 92 of 104 rated clauses are covered in full, 10 are partial and 2 are procedural. The partial and procedural rows are listed here with what is missing.

Clause	Subject	What is covered, and what is not
7.1.5.3.1	Internal laboratory	A defined scope per in-house laboratory exists. The laboratory itself runs in your laboratory system, which is the record for scope, methods, analysts, equipment and results. Results are not yet linked to scope items, and a result outside the scope is not flagged. The requirements are written for that system's team.
7.1.5.3.2	External laboratory	A register records recognition body, number and valid-until date, and flags expiring recognition. It does not check for the accreditation mark on a report or record customer acceptance as the alternative. That check belongs with the laboratory system and is specified for its team.
8.2.1.1	Customer communication	Exchanges are logged with a reply-due date. Nothing is received from customer portals or EDI, so the log is entered by people.
8.3.2.3	Embedded software	The development process assessment, approval and rounds of testing are recorded, and approval can require a passing run. Requirements traceability, the results themselves and version control stay in the team's own tools.
8.5.1.7	Production scheduling	Entries show what they are scheduled from and flag late work. There is no finite-capacity or bottleneck calculation and no import from customer orders or an ERP.
8.5.2.1	Traceability	A plan per part and a timed trace exercise exist. The exercise records the result of a trace and not the trace. Genealogy the system can walk exists only for material lots and production batches, so a trace through discrete-part production relies on records outside it.
8.5.4.1	Preservation	Storage areas are assessed for deterioration at an interval, and material lots keep first-expiry-first-out. For finished goods and work in process the rotation rule is written and not enforced, there are no stock quantities, and obsolete stock is not linked to nonconforming product.
8.7.1.3	Suspect product	Suspect product is flagged, evaluated and sorted before it can be used. Suspect product that is not on the system as a lot cannot be physically stopped from shipping.
8.7.1.7	Disposition	Approval-gated dispositions are tied to lots and batches, and a nonconformance puts a released lot on hold. Quarantine areas are a text field and not a managed location with stock movements.
9.2.2.1	Audit programme	A product audit interval halves while the last audit failed or complaints and claims exist, and QMS processes are ranked for audit. The interval of a recurring planned audit or a process audit does not change by itself when problems occur.
5.1.1.1	Corporate responsibility	Procedural. An anti-bribery policy, a code of conduct and ethics escalation are policy documents and not software.

Clause	Subject	What is covered, and what is not
8.1.2	Confidentiality	Procedural. Role-based access exists. There is no register of customer-proprietary projects with NDA tracking.

Boundaries of the module	What that means in practice
Plant-level manufacturing metrics	PPM, first-pass yield, scrap rate, scorecard rating, jobs on time, OEE and DPMO are worked out by month. OEE exists only where production runs are entered, and DPMO only for inspections that state opportunities and defects.
Process audit question sets	Questions and scoring are the organisation's own wording. No published catalogue such as VDA 6.3 is included, and its grading rules may differ. Only dimensions are measured in product audits.
Competence checks	A required competency is checked at set-up verification and area fitness clearance, and not at every other task assignment such as scheduling or inspection.
Notifications to customers and colleagues	A customer notice after an out-of-tolerance calibration is recorded and not sent. Nobody is told that a specification copy is waiting for acknowledgement.
The quality manual	It is assembled from records. The quality policy and the documented procedures are not in it, and the interactions between processes are listed and not drawn.

This list is deliberately not softened, for the same reason the rest of this paper is specific rather than promotional: an evaluation that finds its own gaps in month four costs more than one that was told about them in month zero. A full clause-by-clause mapping, including everything this module already covers, is available to your evaluation team on request.

See it on your own part number

Thirty minutes, on one real part: a Process Flow Diagram linked to a PFMEA linked to a Control Plan, with the RPN, Class and reaction plans computed in front of you rather than described in a slide.

Book a walkthrough

We build the diagram, the FMEA and the Control Plan for one operation live, on the actual product — not a deck, and not a generic demo account.

Bring one part number and its real failure modes. We will show you the linked trail an auditor would actually follow.

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