

Industry Update Series 2024: APQP 3rd and Control Plan 1st

**Webinar Series**  
**APQP - 3rd Edition**  
**Control Plan - First Edition**

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**Industry Update Series**

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**How do we fit in?**

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- To define the operating parameters for 3<sup>rd</sup> party certification scheme
- To monitor the deployment of 3<sup>rd</sup> party certification scheme through the global oversight function
- Oversight responsibility for UK reporting Certification Bodies
- One of five global oversight offices
- 3rd Party Auditor Qualification
- Office Assessments
- Witness Audits
- SMMT IATF Oversight approved training provider for Malaysia, Singapore, Philippines, Indonesia.
- Lead Auditor Training
- Internal Auditor Training
- Core Tools (SPC, FMEA, MSA, PPAP, APQP)
- QMS Gap Analysis
- Consulting Services

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**Sessions**

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1. Introduction– Alignment background
2. Key Changes in APQP
3. New Manual for Control Plan
4. Going Forward
5. Q & A



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**Notes:**

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**Introduction – Alignment**

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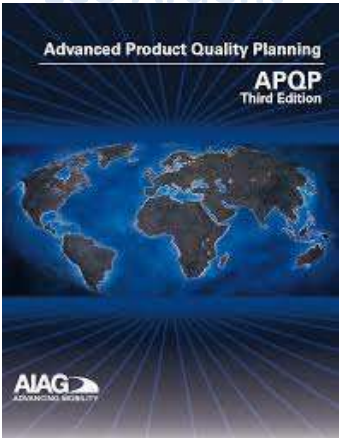
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**Alignment**  
*New APQP and Control Plan manual, published on 1 March 2024*

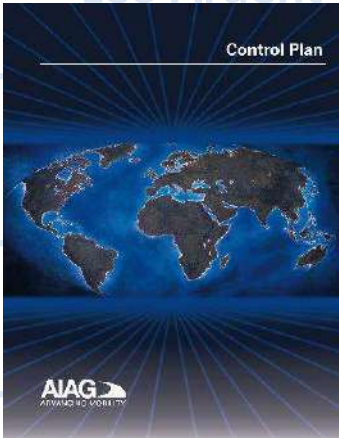
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Advanced Product Quality Planning  
**APQP**  
Third Edition



AIAG  
ADVANCING MOBILITY

Control Plan



AIAG  
ADVANCING MOBILITY

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### Core Tools Hierarchy

*Perspective on core tools hierarchy*

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### Why Update Now?

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- Why the Need for APQP and CP Update?
- It's about time! (1<sup>st</sup> Edition 1994; 2<sup>nd</sup> 2008 –minor changes)

Alignment with IATF16949

Keep abreast with electrification of vehicles

Autonomous driving

1994 1<sup>st</sup>

2008 2<sup>nd</sup>

2024 3<sup>rd</sup>

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**Separate Manual for Control Plan**  
*Why need to have a separate manual for control plan*  
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**Flexibility and Agility**

- Expect more frequent updates than APQP as technologies evolve
- Flexibility to revise based on Lessons Learned and best practices

**Continuous Improvement**

- Ford, General Motors and Stellantis collaboration to list frequent weak points and how to address
- Harmonized CSRs
- Increased guidance on process to develop and use control plans
- Clear requirements related to top opportunities for improvement

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**Key Changes in APQP**

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## Key Changes in APQP

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### Primary:

1. Emphasis on Leadership
2. Early focus in sourcing – high risk supplier evaluation
3. Revised Gated Review with 6 gates and gate checklists
4. Risk Management in the APQP project – renewed interest
5. APQP Program Metrics

### Others:

- Change Management
- Capacity planning with OEE
- Error-Proofing and Mistake-proofing



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## Emphasis on Leadership

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- Change from Management support to Leadership support
- Leadership means “Accountability and Commitment”
- Renewed emphasis for independent review by leadership rather than project management personnel
- Leadership should sign-off (gate review) at the conclusion of every product quality planning phase to reinforce their commitment and support.



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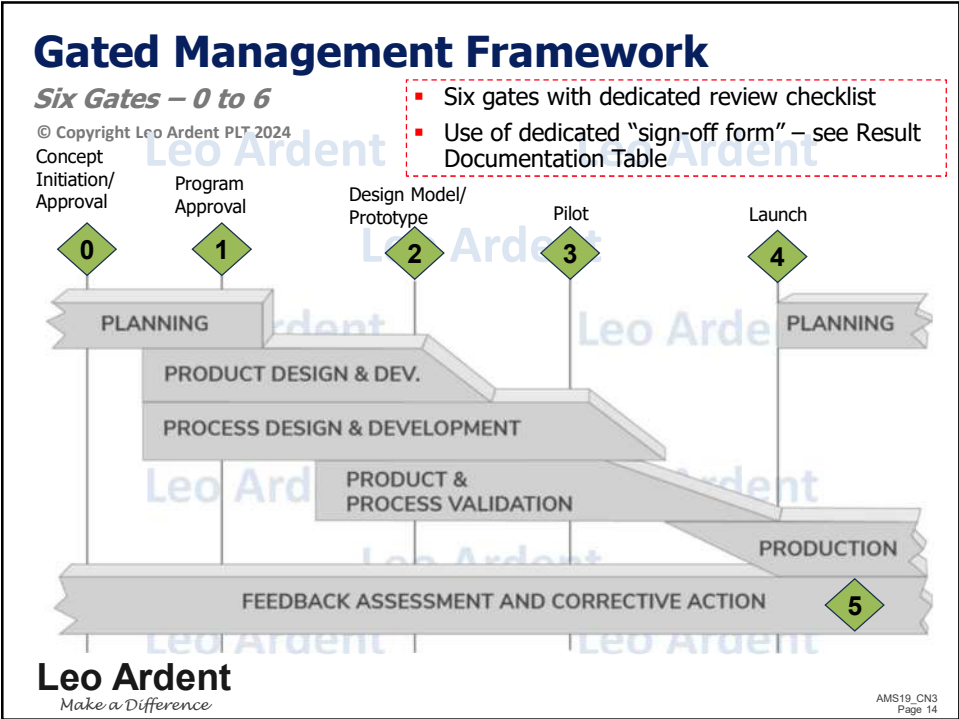
**Sourcing**  
*Early focus in sourcing - high risk supplier evaluation*  
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- Description on sourcing before phase 1 of APQP
- Use of Sourcing checklist to confirm supplier suitability
- A-9 Sourcing Checklist
- Organizations must identify high risk suppliers
- Criteria used to define "high risk" include:
  - A new supplier to the organization
  - Anew location or site ("Greenfield" or "Brownfield")
  - History of poor quality
  - Historical issues that resulted in quality spills at the customer
  - Responsible for one or more incidences of historical field actions

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## Risk Management

*Risk Assessment Mitigation Plan (New)*

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- Use of Risk Assessment Mitigation Plan (RAMP) to reduce or eliminate the impact of risk on a program.
- Risk Evaluation and Mitigation Strategies (REMS) is required to address the risks

Consistent with 6.1 and 6.2 of ISO 9001

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## APQP Program Metrics - Examples

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- Use of Traffic Light System to monitor APQP metrics/ KPIs

PROGRAM MATRIX	Leadership										Project Management Team										Last Review Date 6/22/xxxx	
	Executive	Purchasing	Finance	Role #4	Role #5	Project Manager	IT Manager	Production Manager	Quality Manager	HR/Recruitment Manager	Design Styling Manager	Engineering Manager	Material Manager	Maintenance Manager	Manager	Status						
Deliverables																						
Initiate Planning						x																
Evaluate Risks			x														Number of tasks					
Get Approved Resources		x															number completed					
Obtain Equipment approval			x														%					
Determine Program requirements						x				x												
Create Program Schedule (Timing)						x											Completed					
Determine lead time for parts										x							In process					
Determine Equipment Timing & Ins															x		Not started or missed target					
Testing & verification									x													
Training for all department										x												
Target Date	1/15/xx	2/28/xx	2/15/xx	3/15/xx	3/20/xx	4/15/xx	4/20/xx	4/15/xx	4/20/xx	5/15/xx	5/20/xx	6/15/xx	6/20/xx	6/15/xx	Responsible Owner	Action Plan						
Tasks																						
Assess Security Risks - software		x													J.Smith							
Submit request for New org Template					x										D.Jones							
Review CSR & SOR for compliance	x														T.Samuel							
Submit PO for xxx tester			x												S. Test							
Create orientation packet for New hires				x											A. Zecl							

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## Other Areas of changes

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- Change Management
  - Renewed interest in process for change management with greater details
- Capacity planning with OEE
  - Appendix with use of OEE calculation to support more accurate capacity planning
- Error-Proofing and Mistake-proofing
  - Clarify differences for Error-Proofing and Mistake-proofing to ease confusion

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## APQP Checklists

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- **A-0 APQP Risk Factors Checklist** ← **New**
- A-1 Design FMEA Checklist
- A-2 Design Checklist
- A-3 New equipment, Tooling, and Test Equipment Checklist
- A-4 Product /Process Quality Checklist
- A-5 Floor Plan Checklist
- A-6 Process Flow Chart Checklist
- A-7 Process FMEA Checklist
- **A-8 Change Management Checklist** ← **New**
- **A-9 Sourcing Checklist** ← **New**
- A-10 Control Plan Checklist

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### Control Plan Manual

*New Manual*

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- 22 pages
- Chapter 6 of previous APQP 2<sup>nd</sup> edition
- 67 pages
- New manual, 4 chapters

Chapter 6 Control Plan → Control Plan

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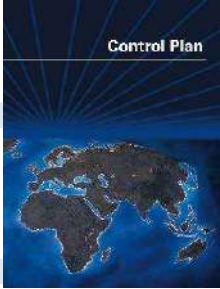
# Chapter 1

## Control Plan Requirements and Guidelines

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### Chapter 1 Control Plan Requirements and Guidelines

1. Control Plan Format (Update)
2. Special Characteristics
3. Pass-Through Characteristics (PTC) (NEW)
4. Error-Proofing Confirmation
5. Families of Control Plans
6. Interdependent Process and/or Control Plans
7. Rework and Repair Processes
8. Reaction Plan Details
9. 100% Visual Inspection
10. Black Box Processes (NEW)
11. Non-Design Responsible Organizations
12. Directed Supply (NEW)
13. Use of Software to Develop Manage Control Plans (NEW)



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# Control Plan Format

## Minor Update

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Prototype    Pre-Launch    Production    Safe Launch

REACTION PLAN	
ACTION	OWNER/RESPONSIBLE

Prototype    Pre-Launch    Production    Safe Launch

**CONTROL PLAN**

Control Plan Number: \_\_\_\_\_ Key Contact/Phone: \_\_\_\_\_ (If Safe Launch is included in Pre-Launch or Production Control Plan, check both boxes)  
Date (Orig.): \_\_\_\_\_ Date (Rev.): \_\_\_\_\_

Part Number/Latest Change Level: \_\_\_\_\_ Customer Engineering Approval/Date (if Req'd.): \_\_\_\_\_

Part Name/Description: \_\_\_\_\_ Supplier/Plant Approval/Date: \_\_\_\_\_ Customer Quality Approval/Date (if Req'd.): \_\_\_\_\_

Supplier/Plant: \_\_\_\_\_ Supplier Code: \_\_\_\_\_ Other Approval/Date (if Req'd.): \_\_\_\_\_ Other Approval/Date (if Req'd.): \_\_\_\_\_

PART/ PROCESS NUMBER	PROCESS NAME/ OPERATION DESCRIPTION	MACHINE SERVICE JIG/TOOLS FOR MFG.	CHARACTERISTICS			METHODS				REACTION PLAN		
			NO.	PRODUCT	SPECIAL CHAR. CLASS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE SIZE	FREQ.	CONTROL METHOD	ACTION	OWNER RESPONSIBLE

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## Chapter 2 & 3

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### Chapter 2: Control Plan Development

1. Control Plan Inputs and Outputs
2. Control Methods

Description on control plan development and format form fields

### Chapter 3: Control Plan Phases

1. Prototype Control Plans
2. Pre-Launch Control Plans
  - include Safe Launch Control Plans (New)
3. Production Control Plans

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## Safe-Launch Control Plan

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- Start of production now include safe-launch
- Safe launch may last up to 90 days
- Criteria to end safe launch to be defined

Concept Initiation/ Approval    Program Approval    Design Model/ Prototype    Pilot    Launch

PLANNING    PRODUCT DESIGN & DEV.    PROCESS DESIGN & DEVELOPMENT    PRODUCT & PROCESS VALIDATION    FEEDBACK ASSESSMENT AND CORRECTIVE ACTION

Prototype Control Plan    Pre-launch Control Plan    Safe Launch Control Plan    Production Control Plan

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**Chapter 4**

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**Chapter 4: Effective Use of Control Plans**

1. Reverse FMEA (new)
2. Layered Process Audits (LPA)
3. Control Plans in Highly Automated Processes
4. Control of Storage and Handling Related Risks
5. Using Family and Foundation FMEAs
6. Management of Abnormalities in Relation to Control Plans

New Section for more effective use of control plans

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**Going Forward**

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## When – Major OEMs expectations

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### Ford, General Motors and Stellantis:

- 6 months after publication
- Ready to accept immediately after publication

Note: nothing new is contrary to current, positively enhanced content is welcome

### What about other OEMS, or tier-1, tier-2?

- Consult your customer or refer to updated CSRs

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## What should you do?

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- Learn the content
- Identify gaps
- Some gaps may require training
- Identify pilot APQP project to implement
- Review the pilot implementation
- Full roll out to others

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## Training Resources

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Course Title	Duration
<b>APQP, Control Plan and PPAP: Understanding and Application</b>	3 days
<b>Advanced Product Quality Planning (APQP)</b>	2 days
<b>Control Plan Fundamentals</b>	1 day
<b>Production Part Approval Process (PPAP)</b>	1 day

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## Contact

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