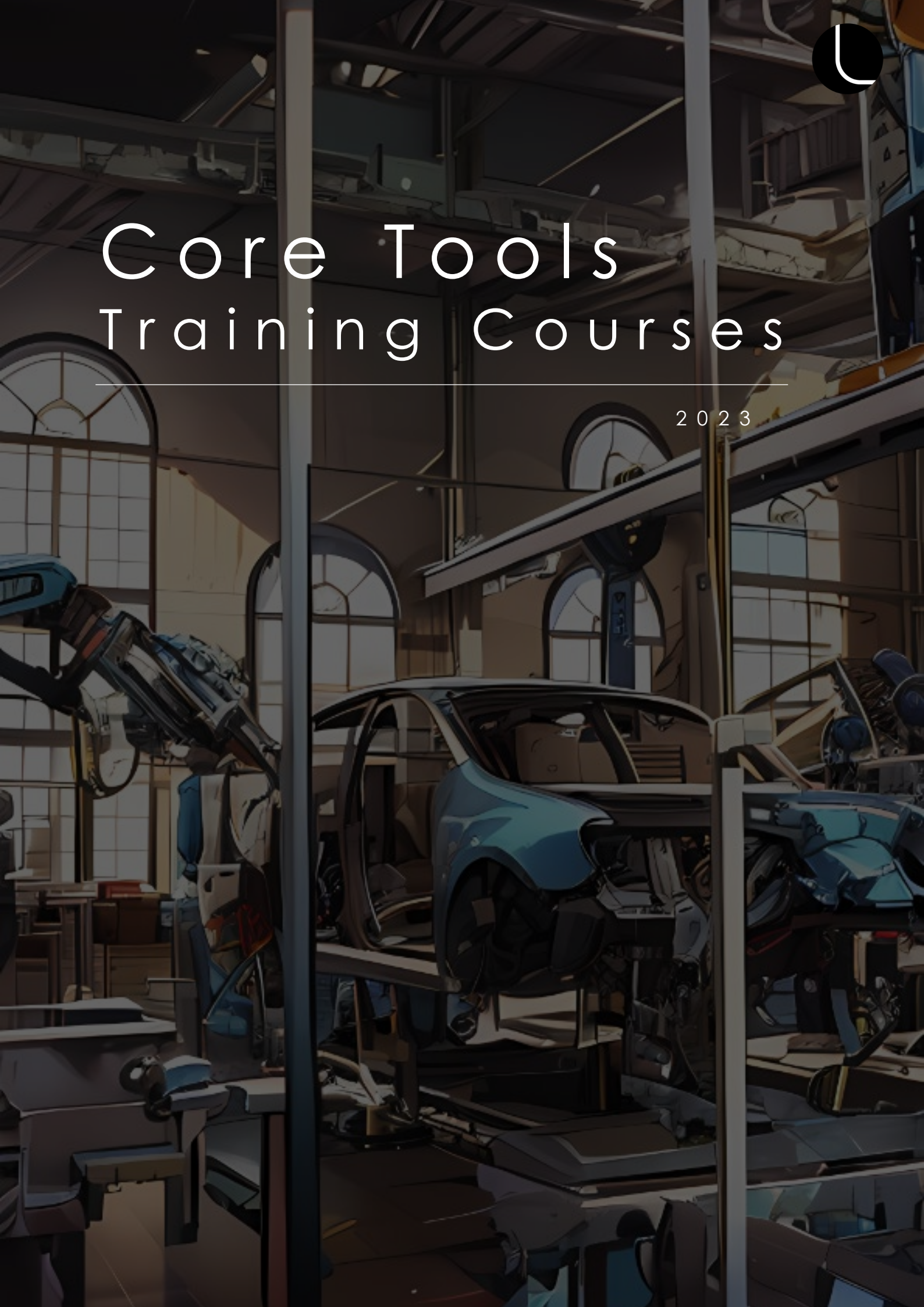

Core Tools
Training Courses

2023

About Us

At LMRG we are passionate about supporting and empowering businesses to excel in today's ever-changing market. We help to overcome challenges, uncover opportunities, and achieve remarkable growth, thanks to our expert guidance and innovative solutions.

Who are we:

LMRG is a team of dedicated advisors with diverse experience across a variety of industries for over 30 years. Our team brings with them a wealth of both practical experience and industry-backed knowledge, acquired through decades of working with businesses off all sizes and sectors.

Our approach;

We believe a collaborative and personalised approach to change is optimal for understanding the individual requirements of an organisation. We take the time to understand the client's unique goals, challenges, and aspirations by immersing ourselves in their operations, culture, and market dynamics. We believe this allows us a greater appreciation for an organisations functions and provides us with invaluable insights to shape our recommendations.

What we do;

We offer various consultancy services designed to target different organisational requirements specific to you. Our services comprise of strategic planning, organisational optimisation & development, market research & analysis and more. We appreciate that a one size fits all approach is not optimal in organisations, therefore, we tailor our solutions accordingly.

Alongside our consultancy support, we also offer training suited to the aerospace and automotive industry and are AIAG-certified distributors for their core tools manuals, accessible through our website.

Why choose us?;

- Expertise – our services are supported by over 30 years of industry experience spanning many sectors, as well as being recognised on a global scale.
- Partnership – we believe in a collaborative approach to building meaningful long-term relationships with our clients by maintaining frequent and honest communication, collaboration, and knowledge transfer.
- Results orientation – our goal is to deliver measurable results that can be maintained in the current market and beyond. We pride ourselves on our ability to achieve long-term change.
- Tailored solutions – we acknowledge the diversity and uniqueness of every organisation and strive to develop solutions that will be most effectively implemented with minimal disruption.

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APQP Overview

Background

APQP is one of the methods utilized in the automotive space to move a project from concept to launch with the intent of minimizing lead times and start up issues. This tool is also the container for EVERY OTHER core tool in the series. If you are serious about learning core tools, APQP is the place to start your journey. This is a 1-day OVERVIEW course and covers the principles and structure of APQP and is perfect for:

- The executive or manager looking for an overview of tools their teams utilize
- Team leaders that need the BIG PICTURE of the process
- Internal Auditors that may need to become familiar with the tool

We intentionally created this curriculum to be beginner friendly and connect the bigger picture with some detail, but:

- We did not overwhelm you with the details …so you walk away knowing what the tool is all about and how it can help your organization.
- We covered the nomenclature, like PHASES, TASKS, GATEWAYS so that you are able to speak the same language as others utilizing the tool.
- We cover both the technical aspects, as well as the managerial aspects of APQP, so that you walk away being well rounded in both the tech, and the soft side of program management

Learning Objectives

- Understand General expectations for each APQP task and the higher system level of phase
- Evaluate the effectiveness of new tasks performed as well as how to measure metrics for APQP
- Understand and apply the use of each new APQP tool in a real-world context
- Create Linkages between APQP tools at the task level
- Understand APQP as a system and how it contributes to the business system

Agenda

- Fundamentals of APQP
- APQP in the business system
- Phase 1 overview
- Phase 2 overview
- Phase 3 overview
- Phase 4 overview
- Phase 5 overview

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PPAP Overview

Background

PPAP is one of the most important core tools in the series, because it is the contractual submission for the part over to you from the supplier, or from you to your customer. The challenge is always in the details of such a complicated document, and questions come up like:

- How should I best review this PPAP to make sure I am seeing the accurate picture?
- What does a good high quality PPAP submission look like?
- How can I review this in less time with higher effectiveness?

In this one-day training, we answer these questions and more, both from the supplier submission side, and the perspective of the plant submitting to the customer. This dual perspective makes the course perfect for

- Supplier Quality Engineers tasked with reviewing and approving PPAP
- Plant associates responsible for submission of PPAP to the customer
- Managers looking to see the details behind PPAP to ensure that they are getting a realistic high-quality PPAP submission into or out of their organization

Through group activities and scenario analysis, the Organizational multifunctional team, and Supplier Quality Engineers (SQE/STA) will learn how to prepare documentation applicable to the Production Part Approval Process (PPAP) and evaluate the effectiveness of your suppliers' Advanced Product Quality Planning (APQP) by evaluating compliance with PPAP requirements

Learning Objectives

- Understand the requirements for preparing the PPAP related to IATF and Customer Specific Requirements;
- Understand and correlate APQP outputs to PPAP requirements:
- Understand the applicability of PPAP
- Apply submission and notification rules Understand, prepare and be able to evaluate PPAP requirements
- Understand submission levels, submission status, and record retention requirements

Agenda

- Why Prepare and Submit PPAP
- PPAP & APQP Relationship
- What is PPAP Process – Introduction
- When Prepare and Submit PPAP - PPAP Section 1
- Where do PPAP Requirements come from?
- PPAP Process Requirements - PPAP Section 2
- Customer Notification and Submission Requirements - PPAP Section 3
- Submission to Customer - Levels of Evidence - PPAP Section 4
- Part Submission Status - PPAP Section 5
- Record Retention – PPAP Section 6
- PPAP Appendix

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Measurement System Analysis

Background

- This one-day course provides an overview of Measurement Systems Analysis (MSA), and the approaches used to analyse both attribute and variable measurements systems defined in the Measurement Systems Analysis reference manual

Learning Objectives

- Understand what MSA is, and where it fits within the organizational structure, the core tools and management system.
- Identify the process of measurement including places where error can be introduced leading to incorrect measurement decisions.
- Develop action plans to minimize error in measurement through proven tools like the fishbone diagram.
- Identify the different types of data used to perform MSA and determine the amount of data necessary to implement an MSA study.
- Learn how to develop an appropriate sampling plan for your MSA studies.
- Define the elements of an MSA plan
- Gain an insight for the types of measurement studies required under IATF for various gages.
- Identify and select the tools necessary for conducting various MSA studies.
- Gain knowledge of guidelines for the various tests used to determine the acceptability level for error and how to take effective action to reduce unacceptable error.
- Learn how to properly communicate unacceptable error for further action if no improvement it possible.
- Incorporate the use of MSA through applied exercises.

Who Should Attend

- Quality managers, manufacturing managers and supervisors, quality team leaders, quality assurance and laboratory analysts / engineers, anyone involved in the implementation of IATF 16949:2016, individuals and cross functional teams interested in risk reduction and anyone who wants a better understanding of MSA.

Additional Information

Duration: 1 Day

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Failure Mode and Effect Analysis

Background

- 2 Days
- This training requires the individual to have a working knowledge and experience with AIAG FMEA 4th Edition execution

Learning Objectives

- Describe major changes, improvements, and benefits on the foundations of Process FMEA execution when comparing AIAG FMEA 4th Edition to the new AIAG & VDA FMEA manuals
- Analyze major changes and improvements adopted in the new AIAG & VDA FMEA handbook by completing a detailed comparison between AIAG & VDA FMEA Handbook to the AIAG 4th Edition manual
- Exemplify major changes, improvements, and benefits of Process FMEAs execution when com- paring a PFMEA prepared using AIAG FMEA 4th Edition Manual to a PFMEA prepared using the new AIAG & VDA FMEA Handbook
- Identify the major changes and improvements when evaluating the content of a Process FMEA prepared using AIAG FMEA 4th Edition Manual compared to a PFMEA prepared using the new AIAG & VDA FMEA Handbook
- Evaluate the consistency of PFMEA application cases
- Measuring PFMEA effectiveness, efficiency, and linkage to the Cost of Poor Quality (COPQ)
- Develop a Transition Implementation Plan from AIAG FMEA 4th Edition to AIAG & VDA FMEA Handbook

Who Should Attend

- Recommended for Core Process FMEA Team to include process/manufacturing engineers, ergonomic engineers, process validation engineers, quality/reliability engineers, project managers, FMEA moderators/facilitators, auditors, and other roles with a background and experience with

  AIAG Process FMEA.

Course Outline

- **Day 1 –** Overview changes of the new AIAG & VDA FMEA handbook, Applying 7-Steps approach and understanding PFMEA steps 1 to 4.
- **Day 2 –** Continue PFMEA steps 5 to 7, process flow, FMEA, control plan and work instruction linkages. Comparing a PFMEA prepared using AIAG FMEA 4th edition and AIAG & VDA FMEA handbook, PFMEA effectiveness, efficiency and linkage to the COPQ and finish with the transition implementation plan from FMEA 4th edition to AIAG & VDA FMEA handbook

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Statistical Process Control

Background

- Statistical Process Control is the use of statistical techniques such as control charts to analyze a process or its output so as to take appropriate actions to achieve and maintain a state of statistical control and to improve the process capability.

Learning Objectives

- Learn proven questioning techniques for effective SPC implementation through developing an Operational Definition
- Demonstrate an understanding of the linkage between SPC and the larger scope of the core tools manuals (MSA, FMEA, APQP), along with the requirements of IATF 16949.
- Identify the sources of variation present and know how to categorize normal versus non-nor- mal
- Differentiate between prevention and detection and illustrate their impact on the Cost of Poor Quality (CoPQ)
- Learn about the different tools that support SPC implementation
- Identify the correct and applicable tools for both variable and attribute data
- List best practices regarding implementation and taking action on out-of-control conditions to aid in effective implementation
- Calculate and Interpret acceptance criteria for process capability indices like CpK and PpK
- Apply methods for implementing the principles of SPC to manufacturing processes
- Apply software to the calculation of Control Limits and incorporation of measurement studies process to the selected Process Controls
- Demystify SPC by learning to carry out all calculations and interpretations following the steps in the SPC reference manual

Who Should Attend

- Recommended for quality managers, quality team leaders, manufacturing managers and technicians, quality assurance and laboratory technicians and engineers, anyone involved in the implementation of IATF 16949:2016, individuals and cross functional teams interested in risk reduction and anyone who wants a better understanding of SPC.

Additional Information

Duration: 1 Day