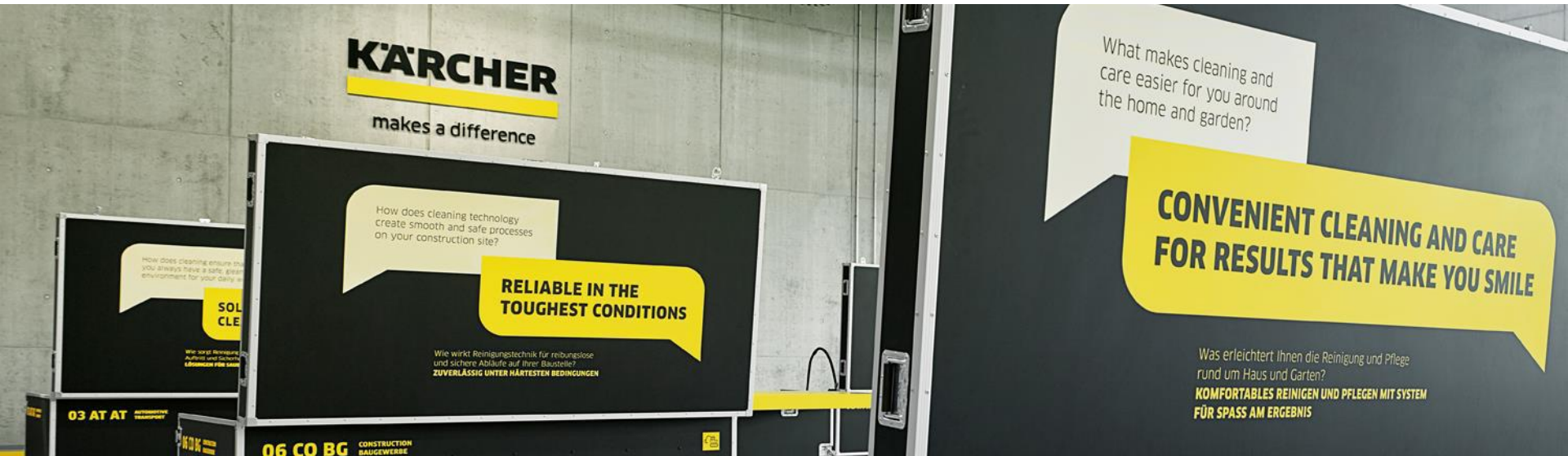


# KÄRCHER

makes a difference



## ADVANCED PRODUCT QUALITY PLANNING APQP @ KÄRCHER

Guideline for suppliers

# APQP – ADVANCED PRODUCT QUALITY PLANNING

## APQP IS A 5 PHASE MODEL TO ASSURE QUALITY RIGHT FROM THE BEGINNING

### Phase 1

Plan and Define Program

### Phase 2

Product Design and Development Verification

### Phase 3

Process Design and Development Verification

### Phase 4

Product and Process Validation and Production Feedback

### Phase 5

Launch, Assessment and Corrective Action

APQP ensures that the Voice of the Customer (VOC) is clearly understood, translated into requirements, technical specifications and special characteristics. The product or process benefits are designed in through prevention.

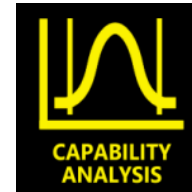
# APQP @ KÄRCHER

## KÄRCHER ADAPTS THE STANDARD APPROACH TO IT'S SPECIFIC NEEDS

APQP @ KÄRCHER means to focus on the most important, process related tools assuring that purchased materials meet our expectations right from the start.

By this we involve our partners to highlight that for us as the world leading brand in cleaning solutions, quality awareness is the base for sustainable success.

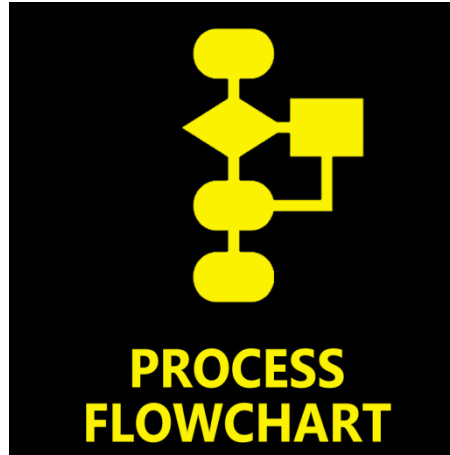
## TOOL OVERVIEW



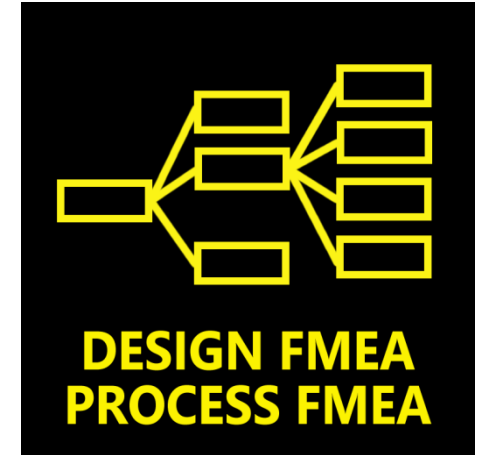
# TOOL OBJECTIVES



Our partners confirm via feasibility evaluation that all requirements are clearly understood and the needed prerequisites given to provide the requested goods.

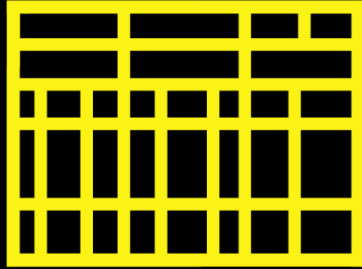


By visualizing the process, a transparent understanding of each step is given including identification of improvement potentials and maintaining repeatability. It's also base for the Process FMEA.



The Failure Mode and Effect Analysis (FMEA) identifies systematically potential risks and therefore prevents unnecessary costs and product liability issues.

# TOOL OBJECTIVES



## CONTROL PLAN (CP)

The control plan is the main document that combines all process steps with the involved capacities, tools and inspections. It provides guidance throughout the whole life cycle of a product.



## MEASURING SYSTEM ANALYSIS (MSA)

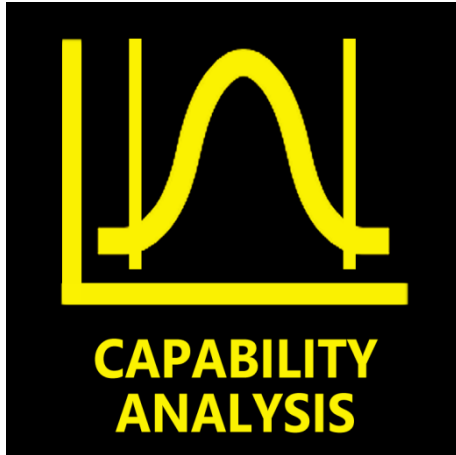
Inspections along the value stream process identify deviations as early as possible. For reliable results the capability of the involved measuring system has to be approved systematically.



## PACKAGING SPECIFICATION

Packaging specifications become more complex as the importance is raising not only by further globalization and transportation needs, but also by trends related to the change in distribution channels.

# TOOL OBJECTIVES



Capability analysis is the base for reliable machine and process release. It shows whether or not accuracy and repeatability are given throughout the variability of production.



Statistical process control prevents non conform results by showing deviations and negative trends at an earliest possible stage so necessary actions can be taken before corrective actions are needed.

# CONCLUSION

By the use of APQP @ KÄRCHER we focus on preventive quality management involving our supply chain partners.

We evaluate possible risks of purchased goods. Together we define necessary preventive measures and tools based on this evaluation.

With this frontloading approach we gain more speed and reliability by avoiding unnecessary loops in the product development process in order to satisfy our customers' needs right from the beginning and in a sustainable way.

# MAKE A DIFFERENCE