

## Paper-Less QM - Functional Overview

### System Scope and Architecture

Paper-Less QM is a quality control testing software package written using the Microsoft .NET framework and a SQL database. Paper-Less QM can be run in a 'standalone mode' or can be linked to other Paper-Less products such as the Paper-Less MDCC (Manufacturing Data Collection and Communications) module. Quality Management .NET allows you to electronically define your testing control plans and link them to individual items or groups of items, enter test results, and report or graph the statistics.

# F U N C T I O N A L O V E R V I E W

### Quality Test Definitions (Control Plans)

- Location specific control plans, by revision levels with effectivity dates
- Change history to support regulatory needs
- Full manufacturing work in process testing support
  - Linked to work center or operation
  - First piece
  - Last piece
  - At setup
  - Random sampling
  - Work in process testing
- Incoming receiving inspection support
  - At dock
  - At inspection
  - First piece / last piece
  - Supports vendor specific control plans (test plans)
  - Skip lot testing
- Flexible sample sizing based on 100% inspection of lot, fixed sample size, AQL tables, and patterned testing
- Flexible test definition - Attribute
  - Button entry style or field entry style
  - Override button or field text to support:
    - Pass / Fail
    - Go / No go
    - Good / Bad
    - Certs delivered / No certs delivered
  - Characteristic specific defect codes

## Paper-Less QM Functional Overview *(continued)*

### Quality Test Definitions *(continued)*

- Flexible test definition - Variable
  - Target value
  - Upper and lower control limits
  - Upper and lower specification limits
  - Automatically warn if outside limits
- Electronic documentation
  - Defined at control plan or at individual characteristic level
  - Auto display to testers at results entry time
  - Free form text
  - Pictures, graphics, URLs, link to any existing document
  - Quality bulletins automatically notify testers of changes to test plans

### Flexible Test Entry

- Auto display quality bulletins
- Link results to order, item, serial #, lot #, employee, date, time
  - Notes, comments, links
  - Test specific instructions
  - Electronic signature if required
  - Flexible entry
    - By characteristic (enter all results for characteristic 1, move on to characteristic 2)
    - By item (enter results for item 1, characteristic 1 and characteristic 2, move on to item 2 and repeat)
  - Interrupted testing & resume support
  - Multiple defect codes per item

### Non-Conformance

- Non-conformance codes
- Non-conformance comments
- Automatic initiation of non-conformance report
- Online charts and log sheets
- Non-conformance reports
  - Auto triggered or manually triggered
  - Multiple defect codes
  - Disposition codes
  - Deviation codes
  - Multiple cause codes
  - Integration with Corrective Action
  - Based on 8D process
  - Due dates, follow up dates, needed by dates, and user defined dates
  - Assigned to routing
  - Electronic signature support
  - Free form comments, text, URLs, links, attachments

### Charting

- Integrated charting
  - Xbar and R charts, histograms, P charts, run charts, individuals charts
- Trends and alarms
  - Industry standard trends and alarms
  - Customizable trends and alarms
  - Electronic notification (e-mail) when alarm is triggered.
  - User defined actions on alarm trigger
  - User Defined holds
    - Hold item, order, operation, serial #, lot # etc.
  - Auto notify tester if trend is triggered
  - Auto display graph if trend is triggered
- Statistics calculations
  - CP, CPK, Ppk, PPM defects, average & standard deviation, mean, range, etc.