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Test Equipment Management and Calibrations Using SAP QM and PM

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[Agenda

- SAP Calibration History
- Calibration Planning
- Calibration Execution
- Calibration Gaps Typically Addressed
- Demo of Calibration Functionality

[Michael Krug

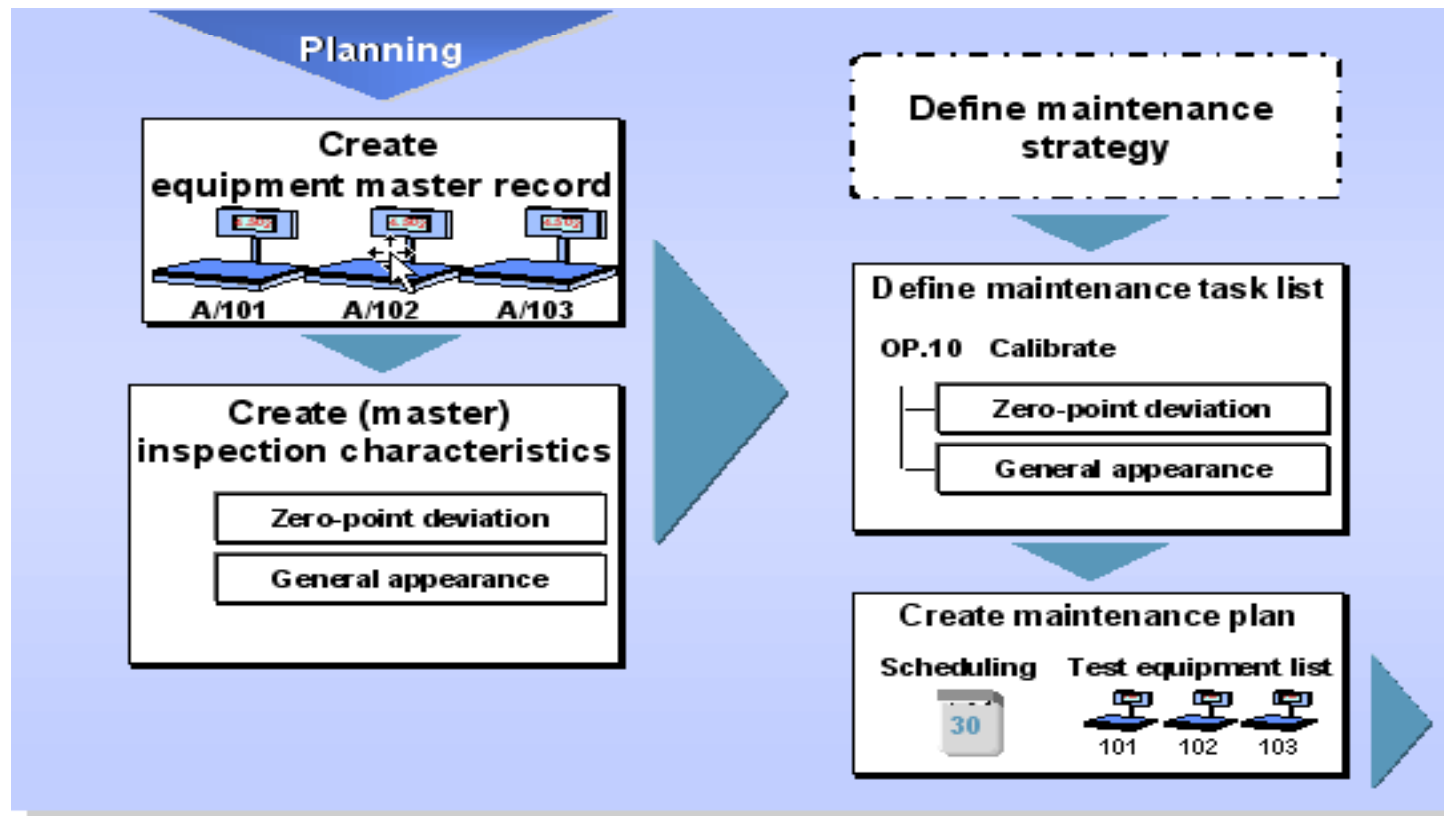
- Techno/Functional Consultant specializing in SAP QM for the past 12 years
- Active ASUG participant and speaker (7 past presentations)
- 4 Full Calibration Implementations
 - Basic scheduling functionality
 - Full blown capturing of readings, calculations, standards, etc
 - Implemented in the pharma and nuclear environments



[SAP Calibration History

- Test Equipment Management aka Calibrations
- Introduced in 4.0b
- Based on Plant Maintenance Functionality
 - Technical Objects
 - Maintenance Plans
 - Work Orders
- Flexibility to be used at Several Levels
 - Simple Scheduling
 - Capturing of As Found/As Left Results

Calibration Planning



[Calibration Planning

- Technical Objects
 - Equipment Masters
 - Can be standards and/or instrument devices
 - Functional Locations
 - Can be used for Loop Calibrations
 - Classification Useful to Capture Calibration Info
 - Checkpoints, Ranges, etc
 - Tolerance Type (plus/minus, % of Range, % of Standard Reading)
 - Calibration Dates

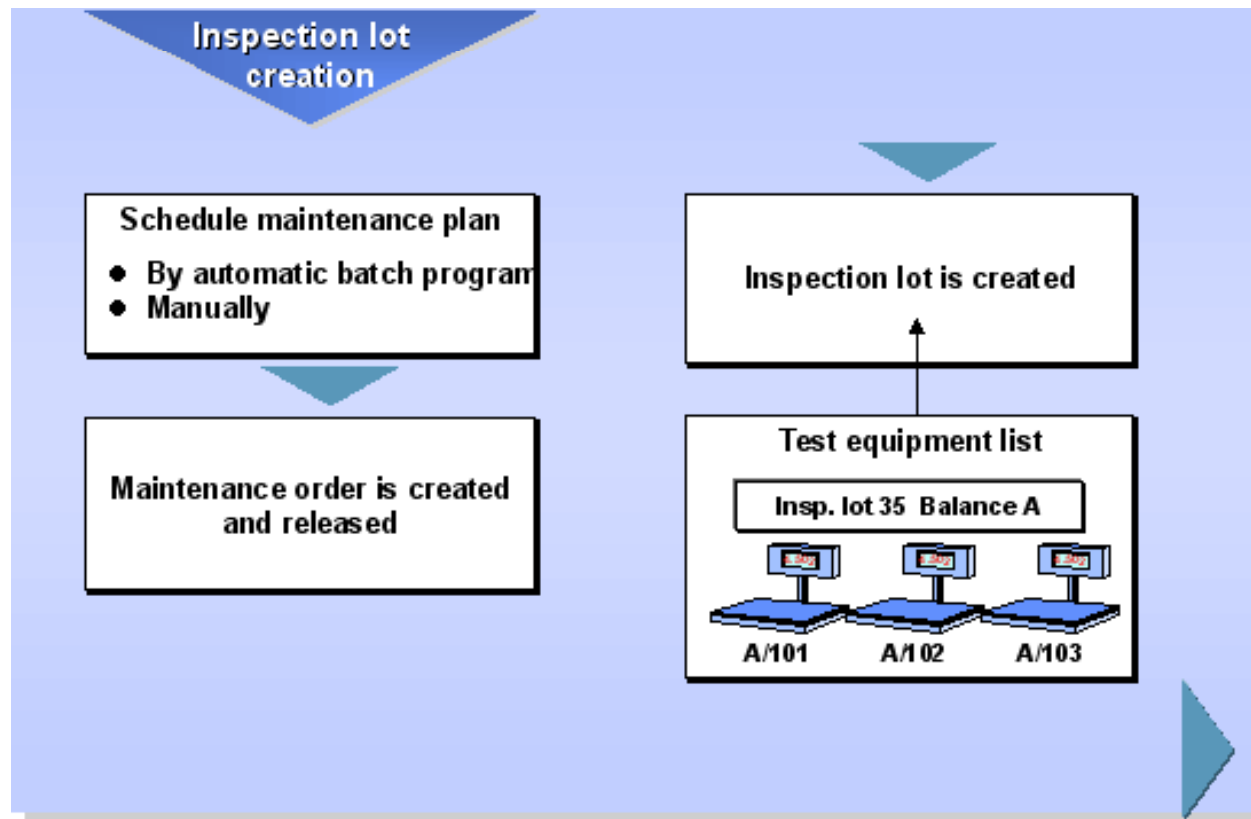
[Calibration Planning

- Task Lists = Inspection Plan
 - Equipment, Functional Location, or General
 - Inspection Points
 - Setup to capture results for Equipment OR Functional Locations
 - Can be used to capture As Found/As Left readings
 - Characteristics/Inspection Methods
 - Capture Standard/Device Readings at checkpoint
 - Calculated Characteristics
 - PRT(s)
 - Used to define standards that can be used
 - At operation level

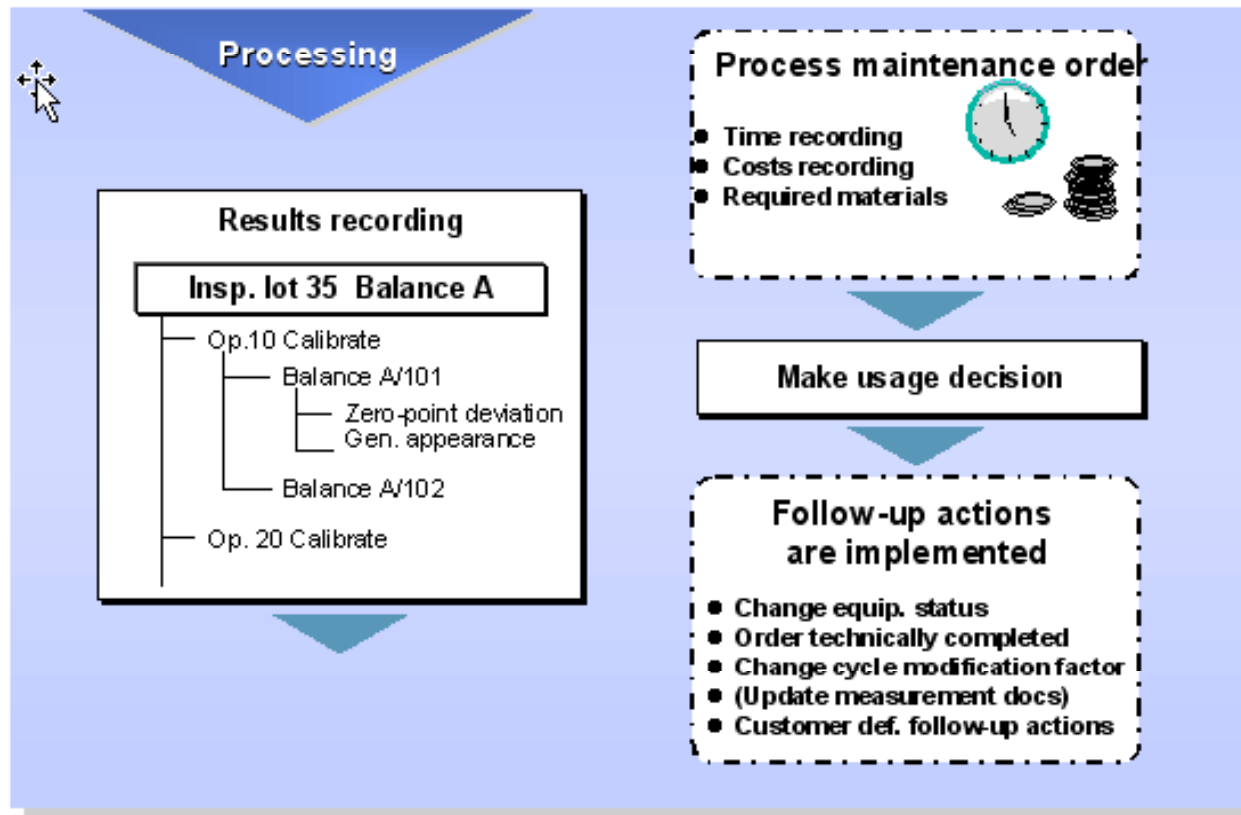
[Calibration Planning

- Maintenance Plans
 - Scheduling mechanism for preventative maintenance
 - Single Cycle plans are most common for Calibrations
 - Define Frequency
 - Shift Factors, Cycle Modification Factor
 - Completion Requirement
 - Several Equipment can be grouped if:
 - Have same due date/frequency
 - Have same cal requirements

Calibration Execution



Calibration Execution



[Calibration Execution

- Scheduling the Maintenance Plans
 - IP10 – Manual
 - IP30 – Automatic Batch Job
- Work Order Creation
 - Call object typically is a Work Order
 - Work Order can go through Planning Process
 - Work Order can come out “Released”
- Inspection Lot Generated on Order “Release”
 - Task List with Inspection Points defined required for Inspection Lot Creation

Calibration Execution

- Results Recording
 - Same process as rest of QM processes
 - QE5In, QE11, QE17, QE20, QE72
 - Results Recorded by Point
 - As Found/As Left Readings
 - Inspection Point Uds
- Maintenance Order
 - Time Recording, Cost Recording, Required Materials
 - Capturing of Standards Used
 - PRTs on Operation

[Calibration Execution

- Usage Decision
 - Required before Order can be Closed
 - Standard Follow up Action to TECO work order
 - QM_PM
 - TECOing of Work Order
 - Updates Completion Date
 - Rescheduled based on parameters in maintenance plan header at next IP30 run

Calibration Execution

- History
 - Maintenance Plan contains execution history
 - IPI8 to find plan for technical object
 - IPI0 to view history
 - Standard QM reports
 - Result History, SPC Charts, UDs
 - Test Equipment Tracking
 - Better know as Forward/Reverse Traceability Report – Transaction QGD2
 - Equipment Classification
 - Good place for Current Information

Calibration Gaps Typically Addressed

- Capturing of Standards
 - Method provided, but lacking
 - Forward/Reverse Traceability Report
- Complex Tolerance Limit Calculations
 - % of Range, % of Standard Reading
 - Can be implemented with user exit
- Calibration Stickers
- Result Recording Transactions
 - Mainly developed for Vendor, Material & Customer, although some exist

Demonstration of Calibrations

Wow!



Thank you for participating.

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For ongoing education on this area of focus, visit the Year-Round Community page at www.asug.com/ycr

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3202

To learn more about Calibrations or QMS's Accelerated Calibrations Implementation (ACI)

Visit us at in the Pod Village at Pod E18