

Quality Inspections

Course Objectives

At the conclusion of this course, you will be able to:

- ❑ Use QM Master Data to perform Quality Inspections
- ❑ Create and manage Inspection Lots
- ❑ Record Results and Defects
- ❑ Enter a Usage Decision

Table of Content

Inspection Planning

- ❑ QM Master Data

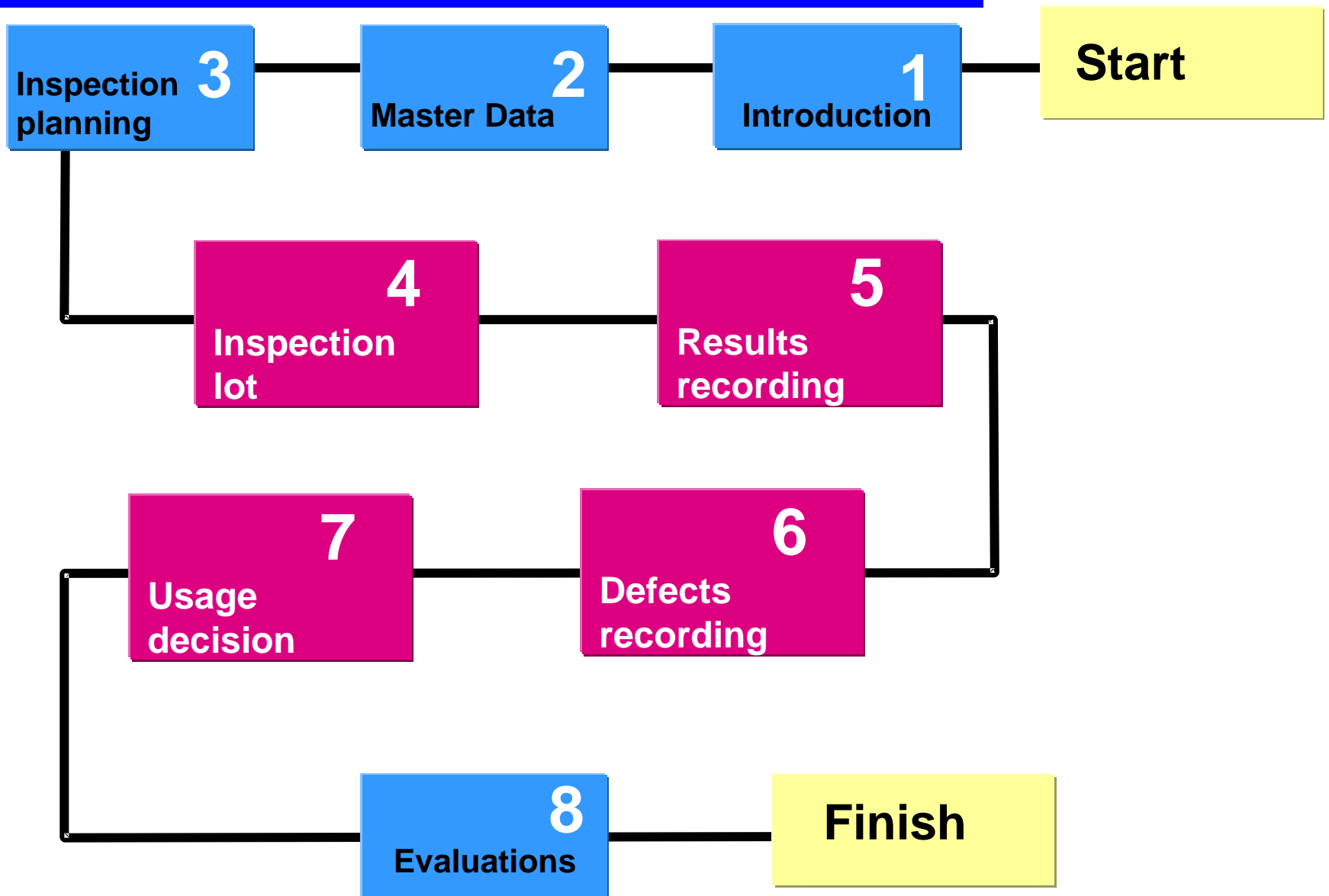
Quality Inspection

- ❑ Create and Process Lots
- ❑ Result / Defect / Notification
- ❑ Usage Decision

Purpose of QM

- ❑ SAP R/3 QM module will be a strategic management tool from quality planning to quality evaluation
- ❑ Quality Management will be used to store and manage quality related data throughout the supply chain.
- ❑ The QM module will handle the traditional tasks of quality planning, quality inspections, quality certificates, quality notifications, and quality control
- ❑ Continuous process and product improvement
- ❑ Continuous correspondence for the market demands and wishes

QM Process Overview



Inspection Planning

Inspection Planning deals with QM Master data

Essential QM Master Data are

- ❖ Sampling Procedure
- ❖ Inspection Method
- ❖ Master Inspection Characteristics
- ❖ Inspection Plan
- ❖ Codes and Catalog
- ❖ Selected Set

Master Data

Sampling Procedure contains the

type of sample - Fixed sample or % sample

Valuation type – Automatic or manual valuation

Inspection Point – Usage for inspection Point

Inspection Method:-

It specifies the specific inspection type to be used to inspect any product.

Master Data

Master Inspection Characteristics

It is the commonly maintained parameter to be inspected

It may be qualitative or quantitative characteristics

Quantitative characteristics will have upper / Lower value

Qualitative characteristics will have selected set

Control indicator maintained in MIC will control

Need of sampling procedure

Type of Result recording – Single or summarized

Master Data

Inspection Plan

It contains the parameters to be inspected for any material.
It is created for Material and plant combination

It contains

Master Inspection Characteristics

Sampling Procedure

Lower / Upper limit for characteristics

Selected set for Qualitative characteristics

Master Data

Codes and Catalog

Codes are used to supply value during Result recording and during Usage decision.

There are various codes created for various catalog.

It is maintained at client level.

Codes are created for Attributive catalog – 1 and for Usage decision catalog – 3 and for many other Notification requirements.

Master Data

Selected Set

Selected set is the collection of various codes from the code group and created specifically to a particular plant.

Selected Set are created for Attributive catalog – 1 and for Usage decision catalog – 3.

The QM Process Overview

Quality Planning

- ✓ Basic data - building blocks
- ✓ Material master
- ✓ Vendor Master
- ✓ Inspection plans
- ✓ Material plan assignment

Quality Inspection

- ✓ Inspection lot creation
- ✓ Results recording
- ✓ Defects recording

Usage Decision

- ✓ Accept or Reject decision
- ✓ Stock postings
- ✓ Activate Notifications

Quality Notification

- ✓ Notification created
- ✓ Defects
- ✓ Tasks
- ✓ Activities

Reporting & analysis

- ✓ SAP reports

Functions in the QM Component



□ Quality Planning

- ❖ Master data for inspection planning, material specifications.



□ Quality Inspection

- ❖ Inspection lots, inspection results, and defects recording
- ❖ Usage decision and follow up actions



□ Quality Certificates

- ❖ QM information system, vendor evaluation
- ❖ Certificate profiles



□ Quality Notifications

- ❖ Internal / external problem processing



□ Quality Control

- ❖ SPC and control charts



□ Test Equipment Management

Functions in the QM Component

- Quality planning
- **Quality inspection**
- Quality certificates
- Quality notifications
- Quality control
- Test equipment management

Record results and determine whether the inspected material fulfills the quality requirements.

Quality inspection covers:

- Inspection lot processing
- Results recording
- Defects recording
- Usage decision

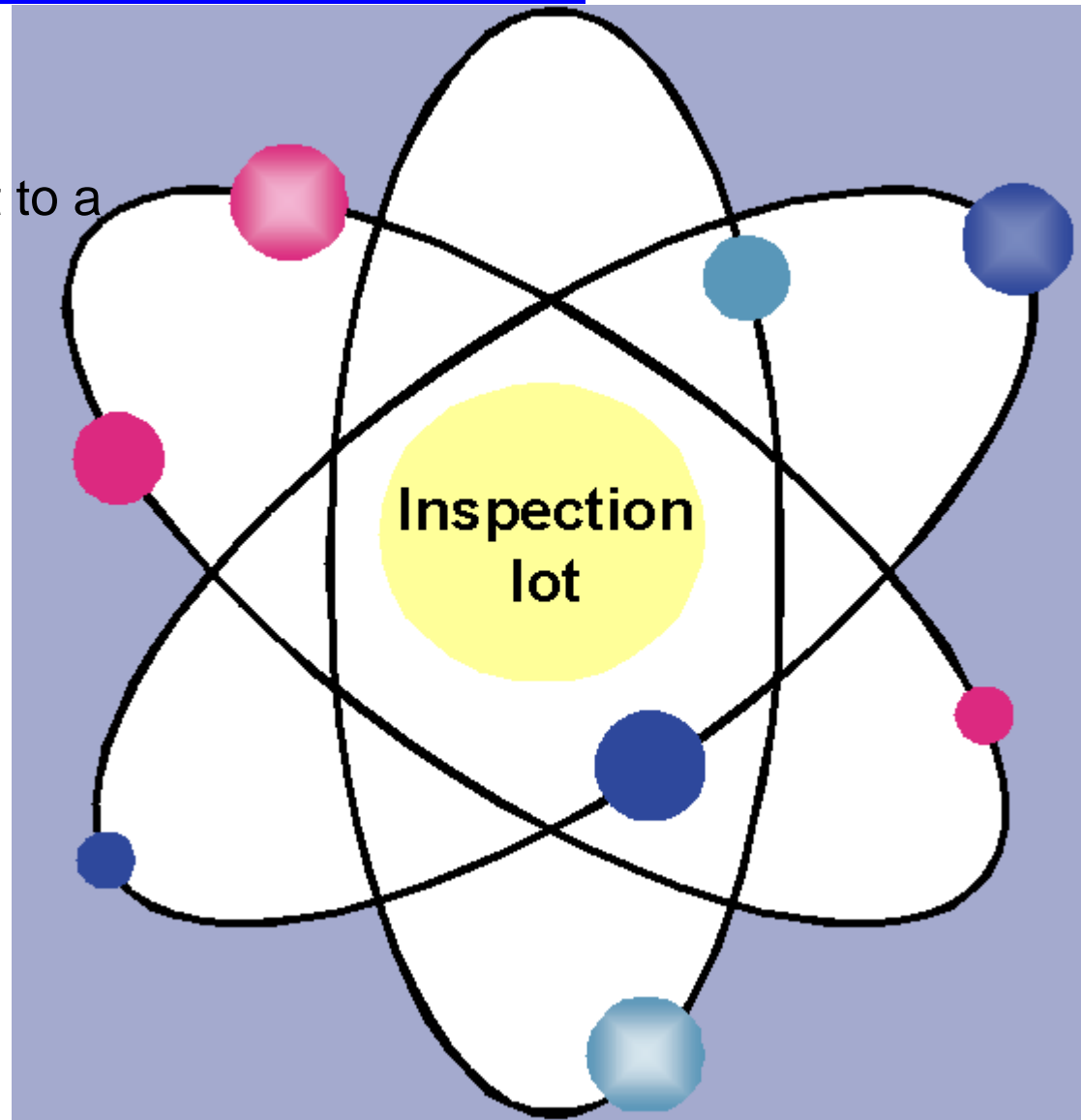
Inspection Lot

- Logically

- ❖ Represents the request to a plant to perform quality inspection on a certain quantity of a material.

- Technically

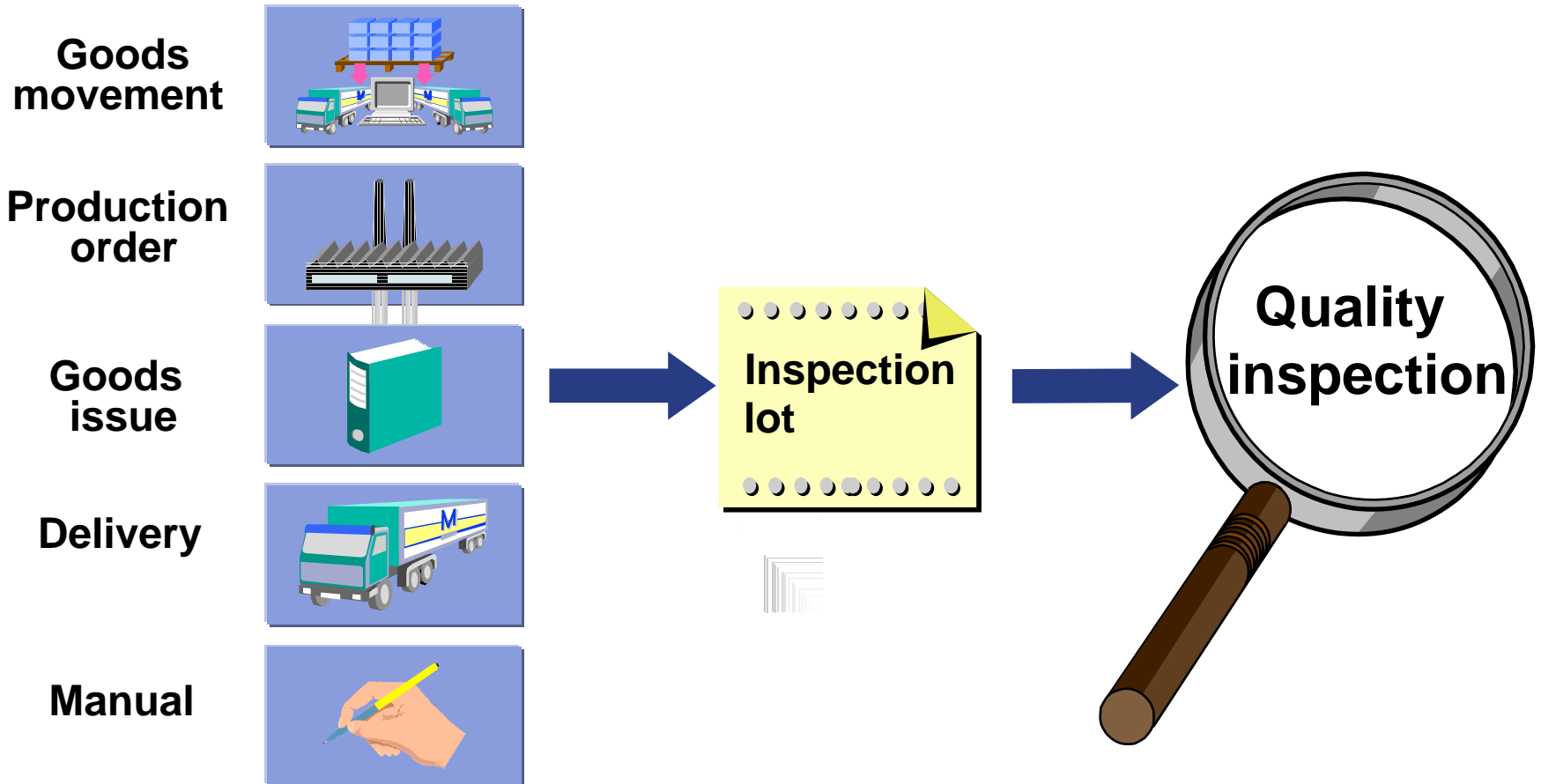
- ❖ Database tables with several fields



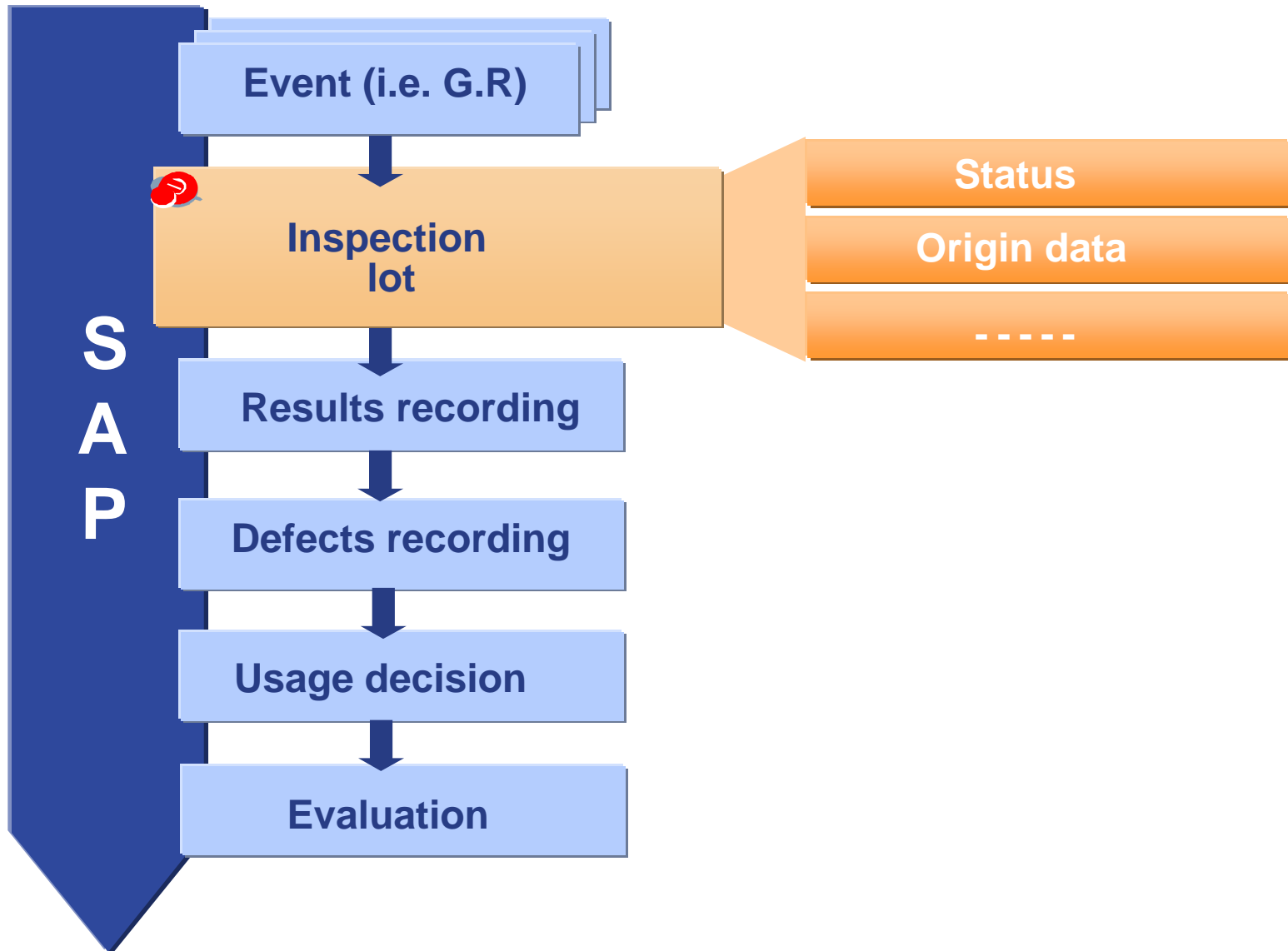
QM Inspection Process



Inspection Lot



QM Inspection Process



Inspection lot origins

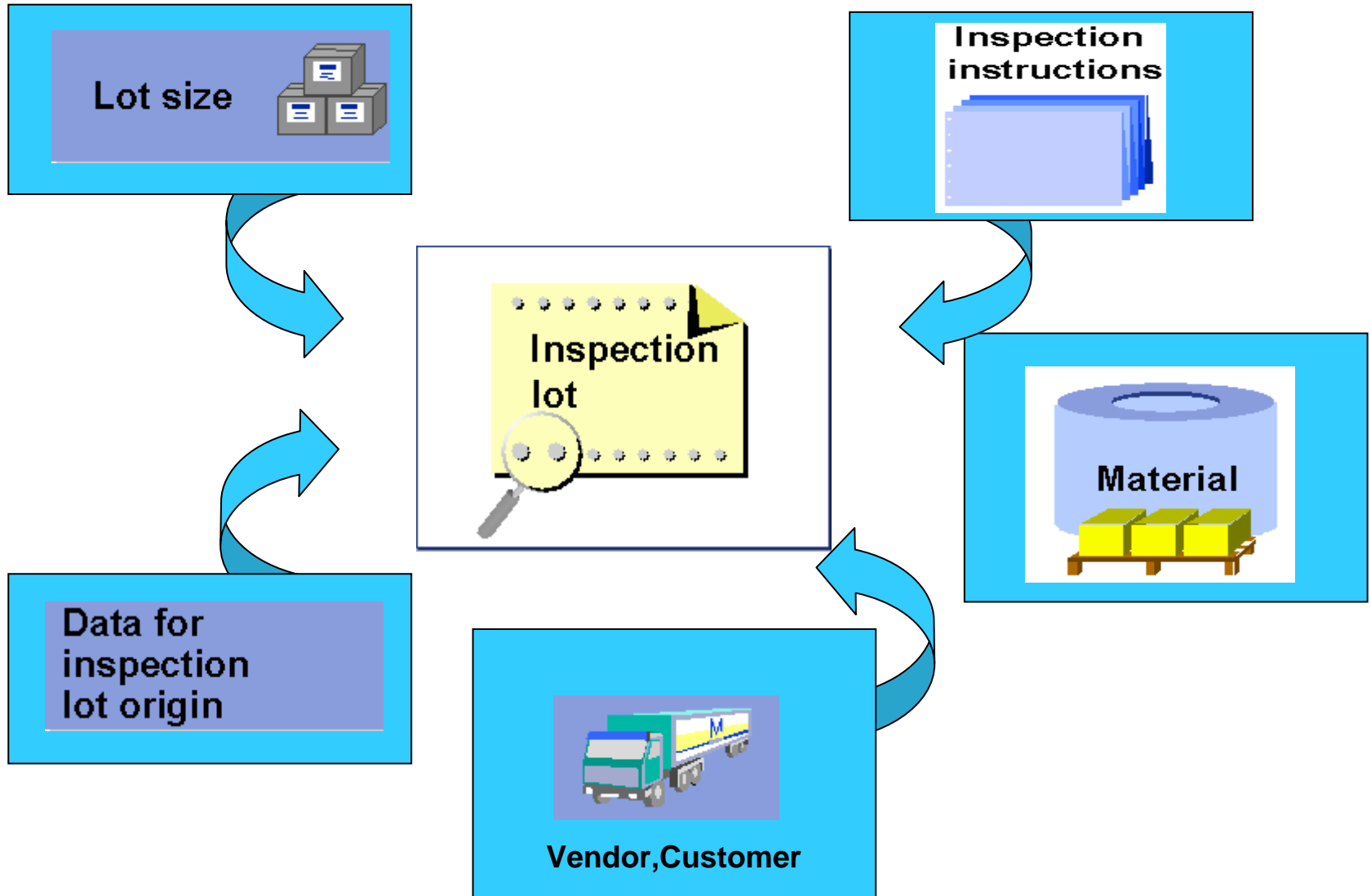
Stock relevant

- **01 GR from procurement**
- **04 GR from production**
- **05 Other Good Receipt**
- **06 Customer return good**
- **08 Stock movings**
- **09 Reccurring inspection**
- **10 Good issue in SD**
- **11 Good ussue in SD**
- **12 Good issue in SD**

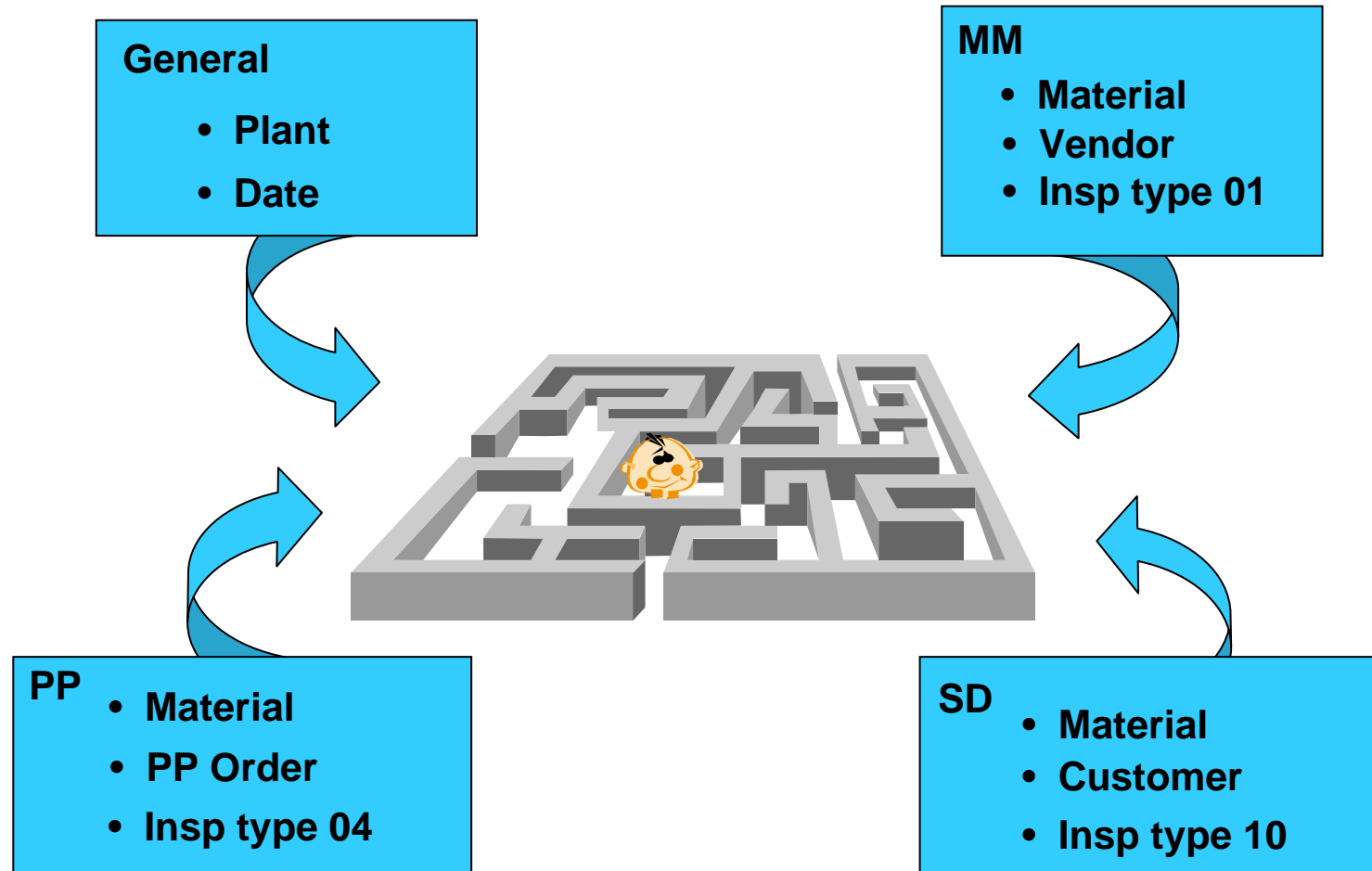
Non-Stock relevant

- **02 Good issue in production**
- **03 In-process inspection**
- **07 Vendor audit**
- **13 In-process insp rep.**
- **14 Calibration**
- **15 Physical samples**
- **89 Miscellaneous**

Inspection Lot Data Record



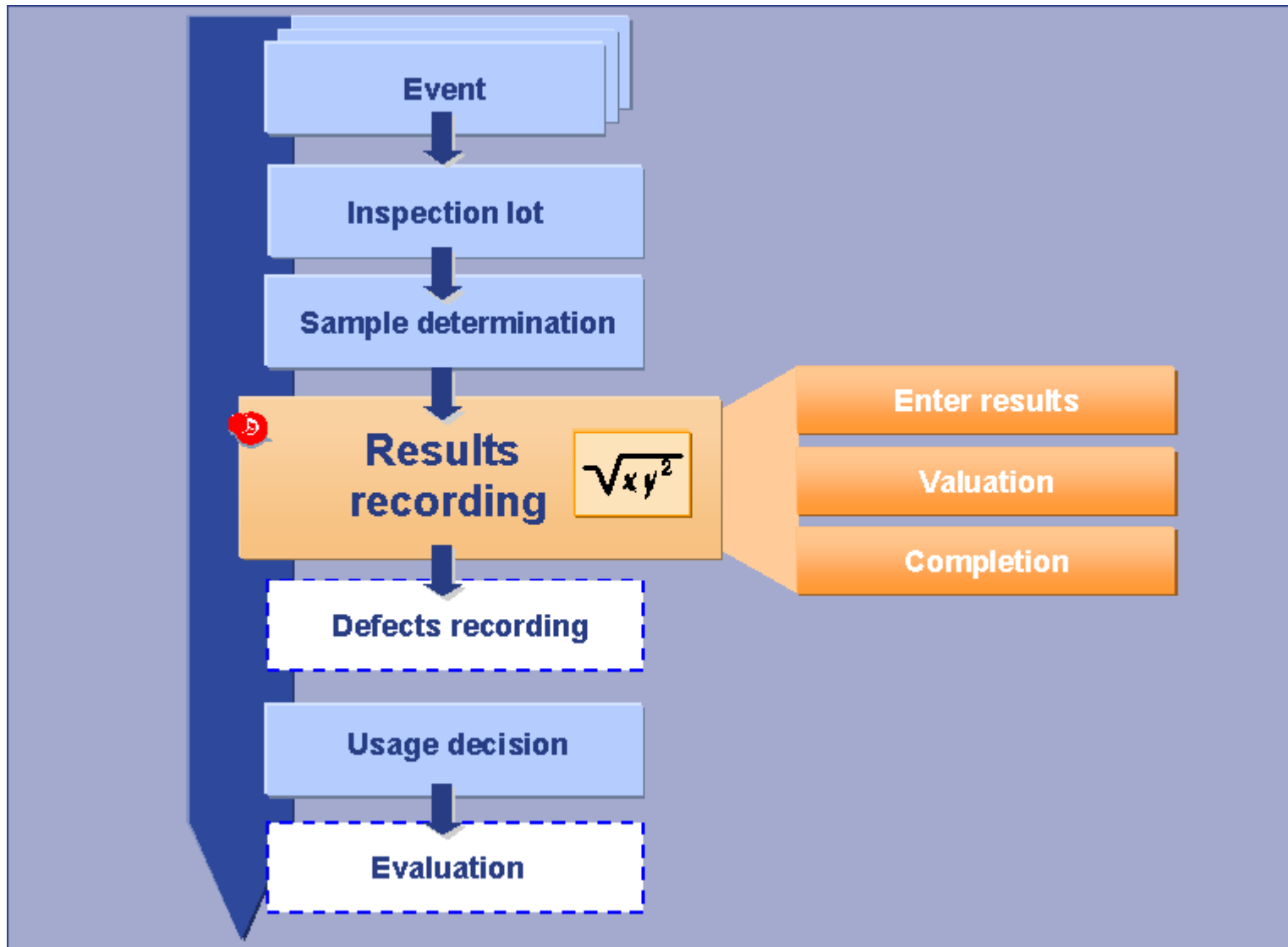
Inspection Lot Search



F4

Matchcode

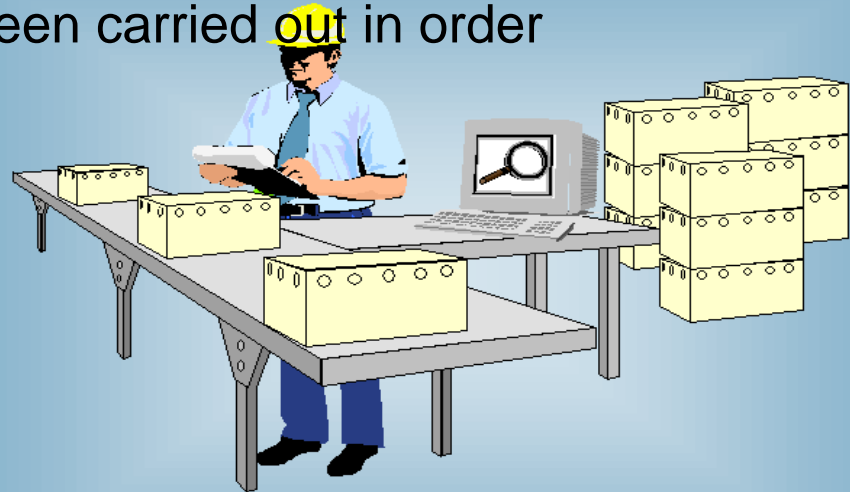
Results Recording



Results Recording

❑ Pre-conditions for record inspection results

- ❖ Inspection characteristic has been created
- ❖ Inspection specification has been assigned
- ❖ Sample determination has been carried out in order



❑ Valuation of the inspection characteristics

- ❖ Based on the sampling procedure valuation mode
- ❖ Automatically (Accepted, Rejected)
- ❖ Manually (Accepted, Rejected)

Results Recording

The screenshot displays the SAP R/3 interface for recording inspection results. The title bar reads "Record Results for TBA-FERT001: Single Values for Characteristic". The interface is divided into several sections:

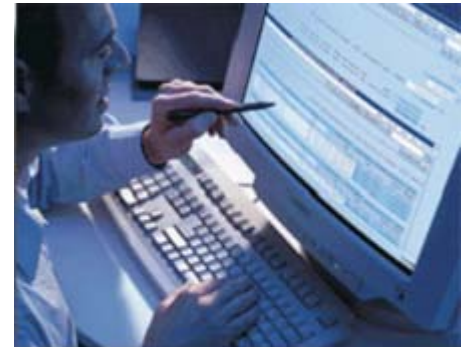
- Worklist:** A tree view on the left side showing a list of inspection points. The selected item is "0010 Durchmesser prüfen".
- Result recording area:** A table in the center-right showing recorded values. The table has columns: No, Measured v..., V..., Defect cl..., Attribute, Insp. unit no., and Insp. descri. The data rows are:

No	Measured v...	V...	Defect cl...	Attribute	Insp. unit no.	Insp. descri
1	100	✓			21	
2	101	✓			22	
- Graphic area:** A line chart at the bottom titled "Durchmesser prüfen". The y-axis ranges from 90 to 110, and the x-axis shows 10 data points. The chart displays a fluctuating line with diamond markers and two horizontal red control limit lines.

Results Recording

□ Goods Receipt from Production

- ❖ Inspection Lot Automatically Generated upon GR
- ❖ Results Recording entered

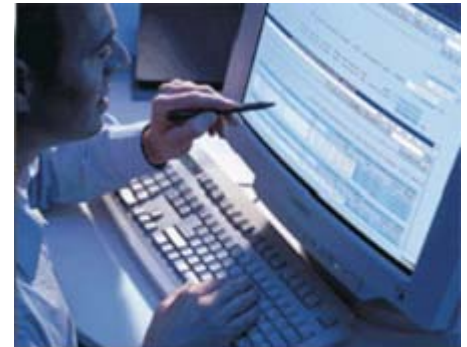


Results recording



Results Recording (Cont).

- ❑ Goods Receipt from Vendor – Non Critical Material
 - ❖ No Inspection needed
 - ❖ Certificate must be enclosed
 - ❖ Material placed in appropriate stock category
 - ❖ No Results Recording into SAP



Results recording

Results Recording (Cont).


- ❑ Goods Receipt from Vendor – Critical Material
 - ❖ Inspection Lot Automatically Generated upon GR
 - ❖ Results Recording and Valuation entered
 - ❖ Usage Decision entered



Results recording

Characteristic Valuation

Manual



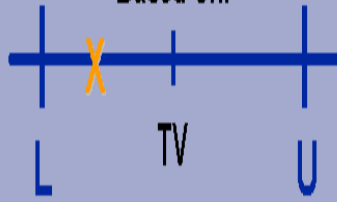
OK Not OK

Attribute codes

Filling	
Wood wool	OK
Paper	Not OK
Polystyrene	Not OK

Tolerance range

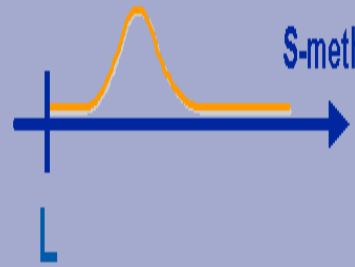
Based on:



L TV U


Sampling plan

Variable inspection



S-method

SPC



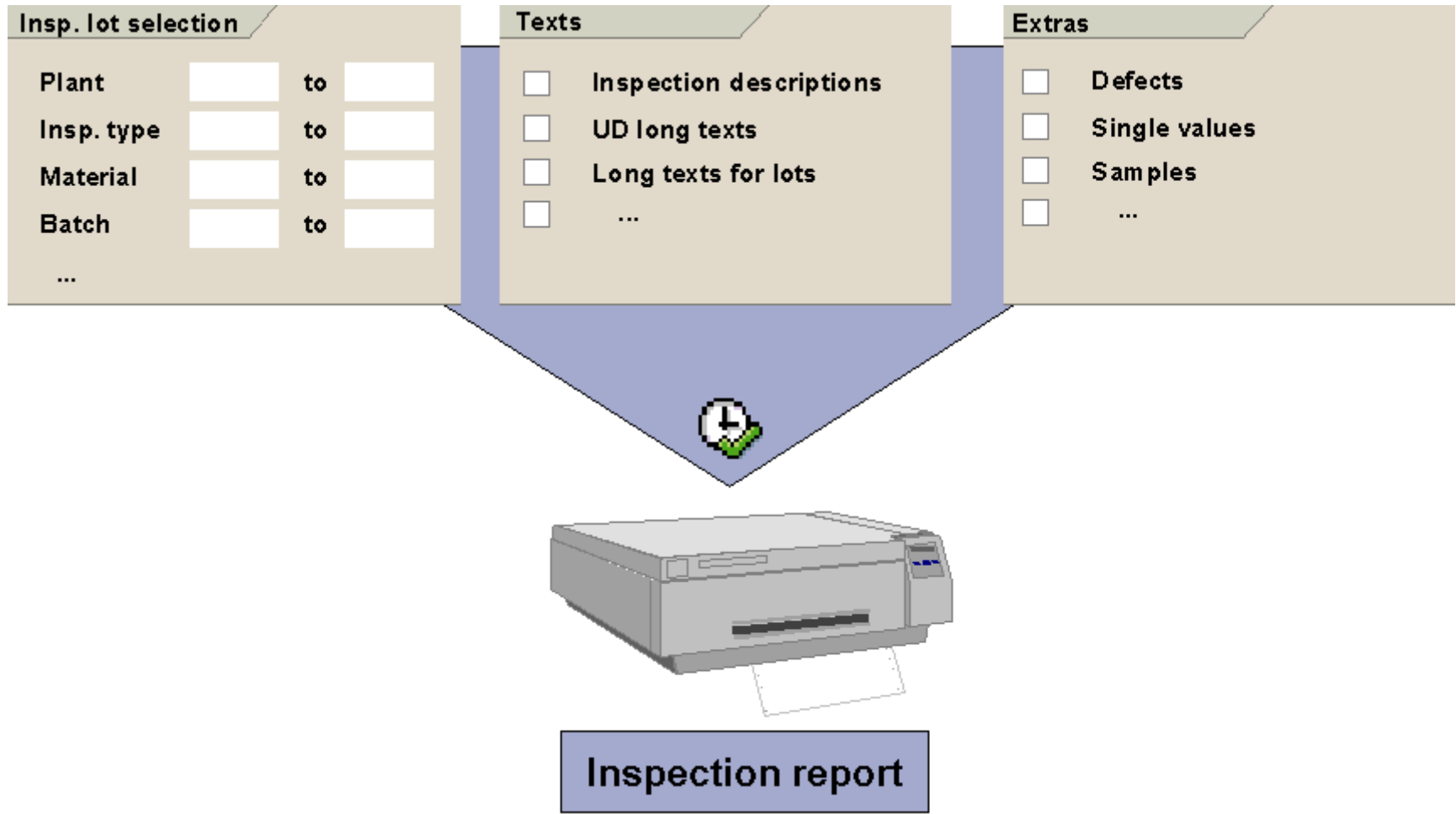
Action limit

Not OK

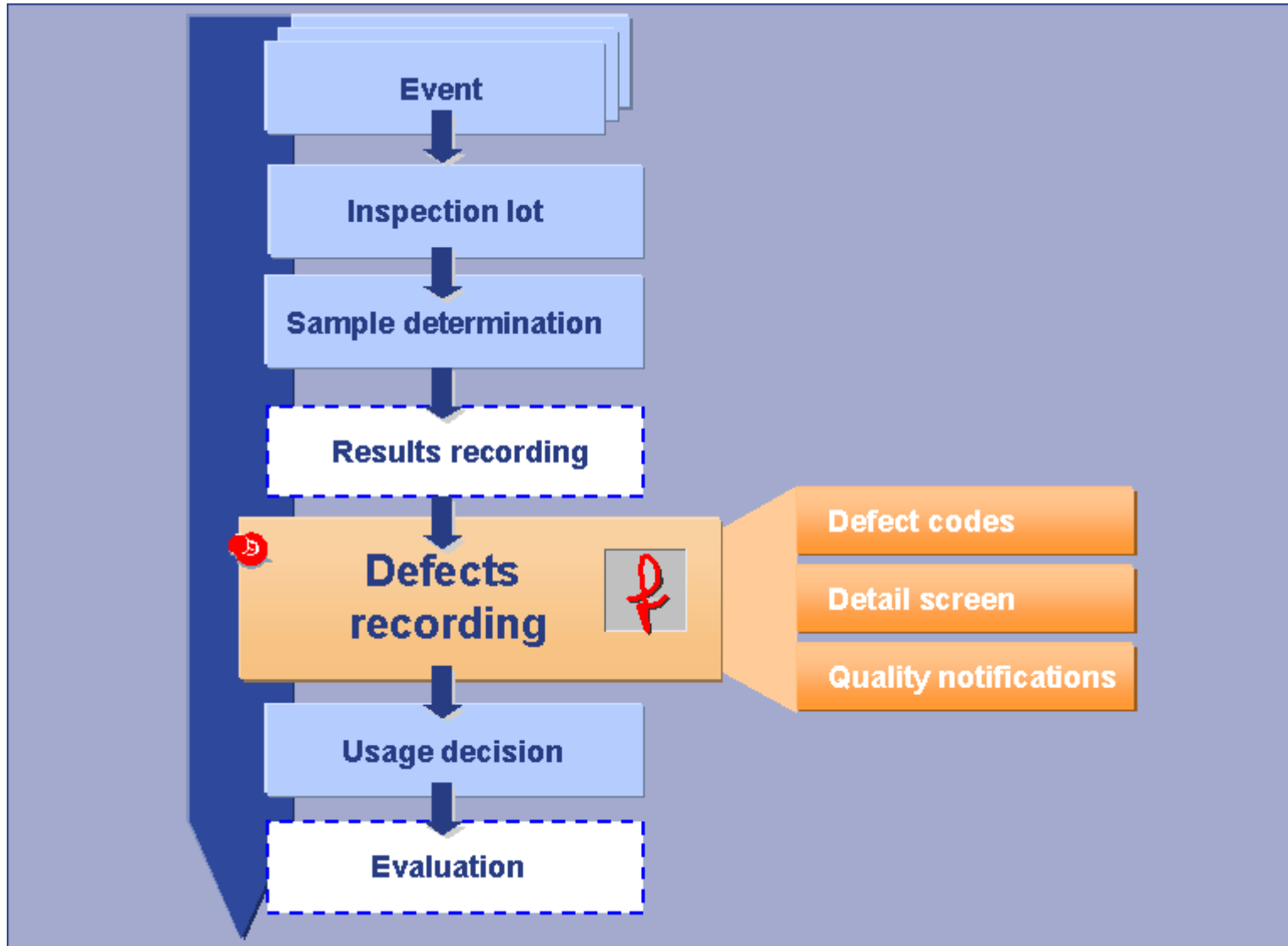
OK

Not OK

Inspection Results Printout



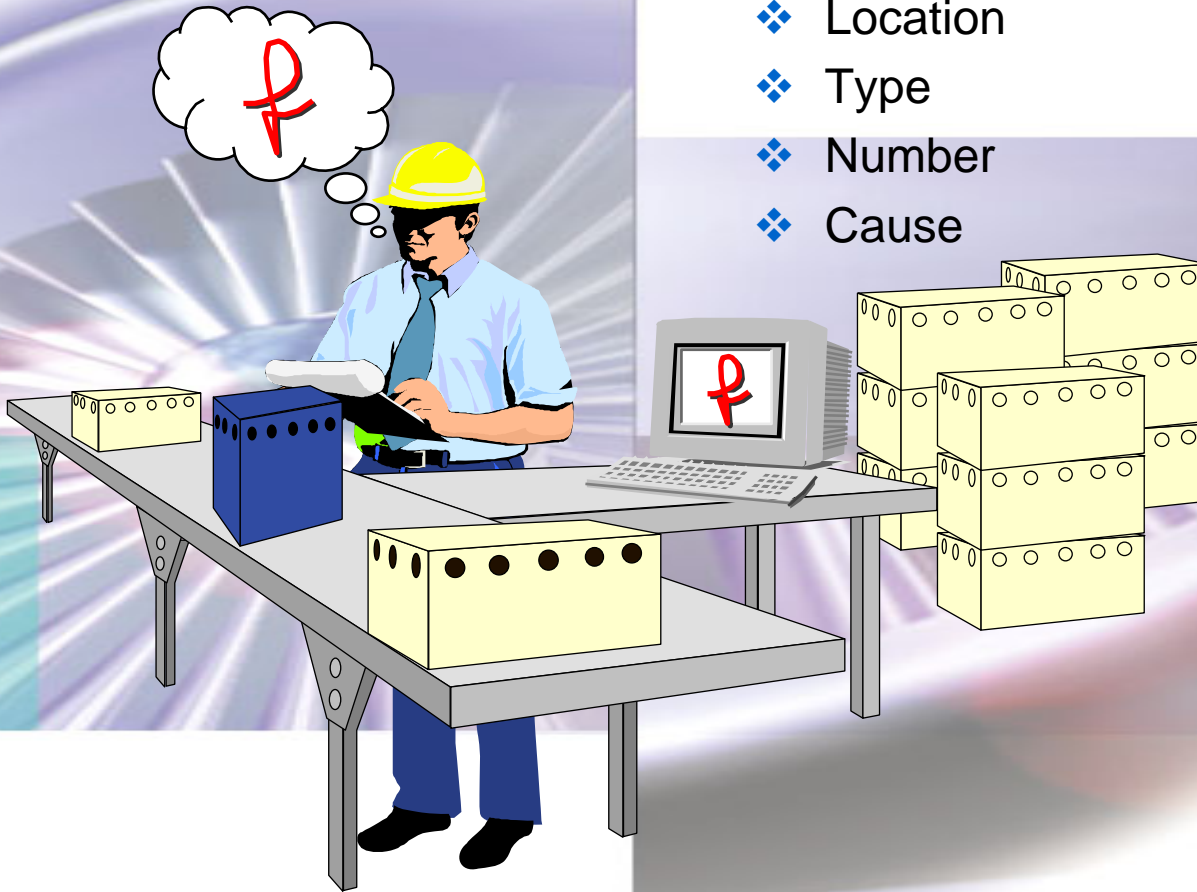
Defects Recording



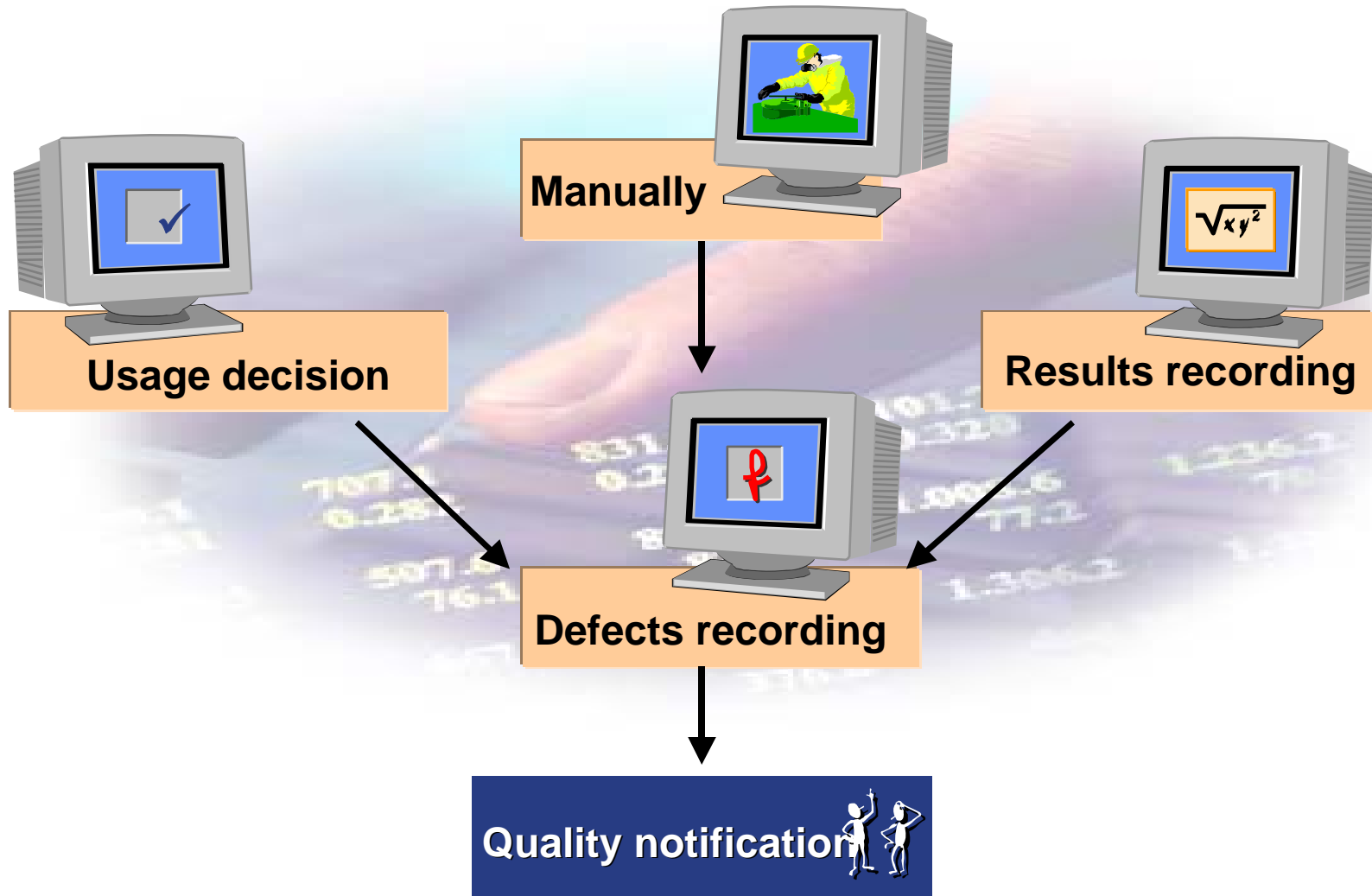
Defects Recording

- Describe the defect

- ❖ Location
- ❖ Type
- ❖ Number
- ❖ Cause

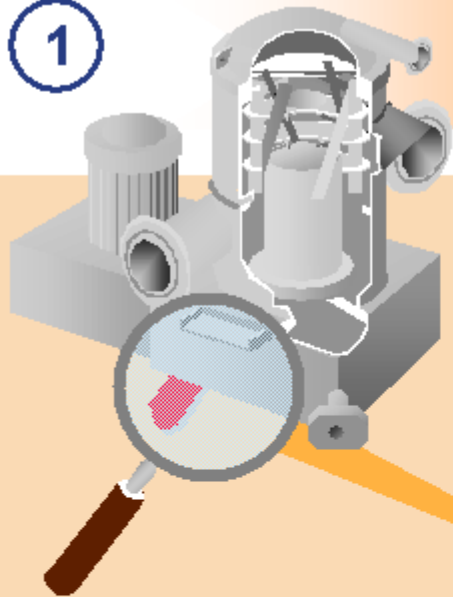


Defects Recording



Defect record activation

1

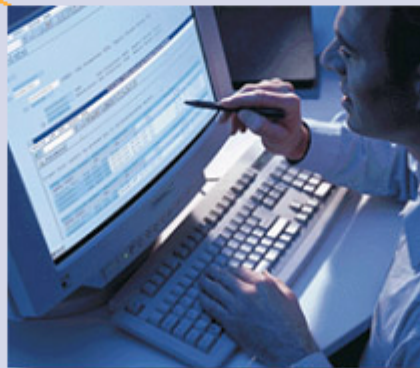


Defect is identified during the quality inspection

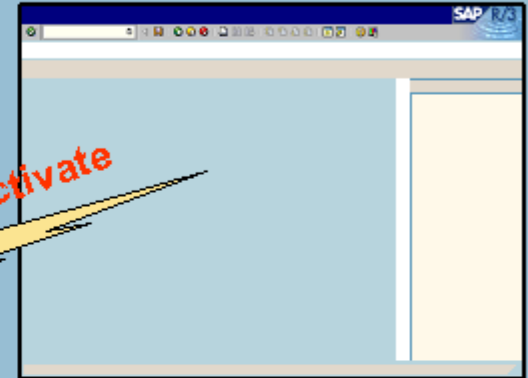
2

Defects are recorded in system

Quality notification
Status:
Defects recording
Outstanding notification



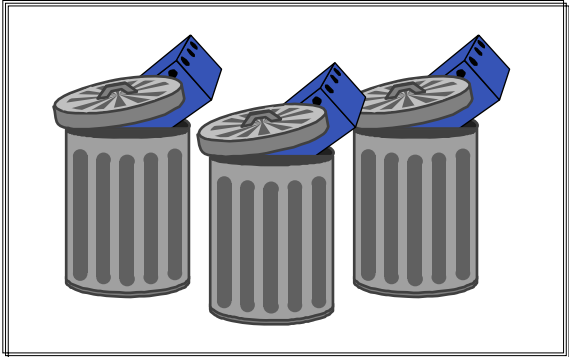
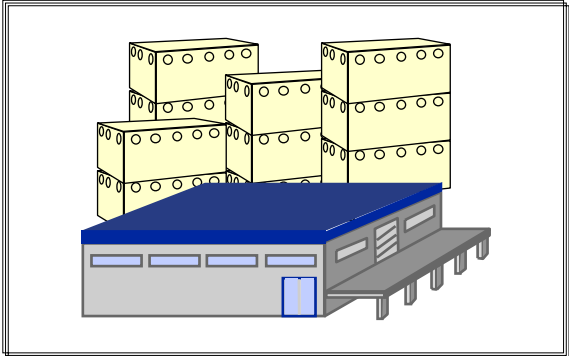
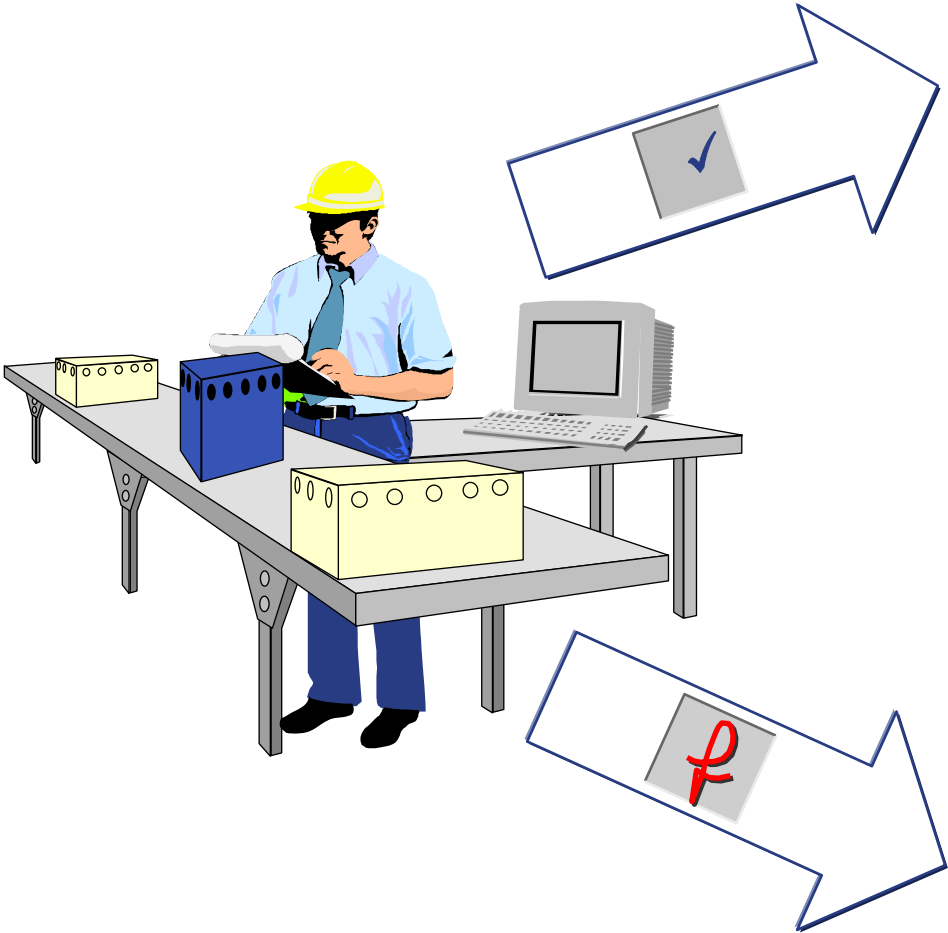
3



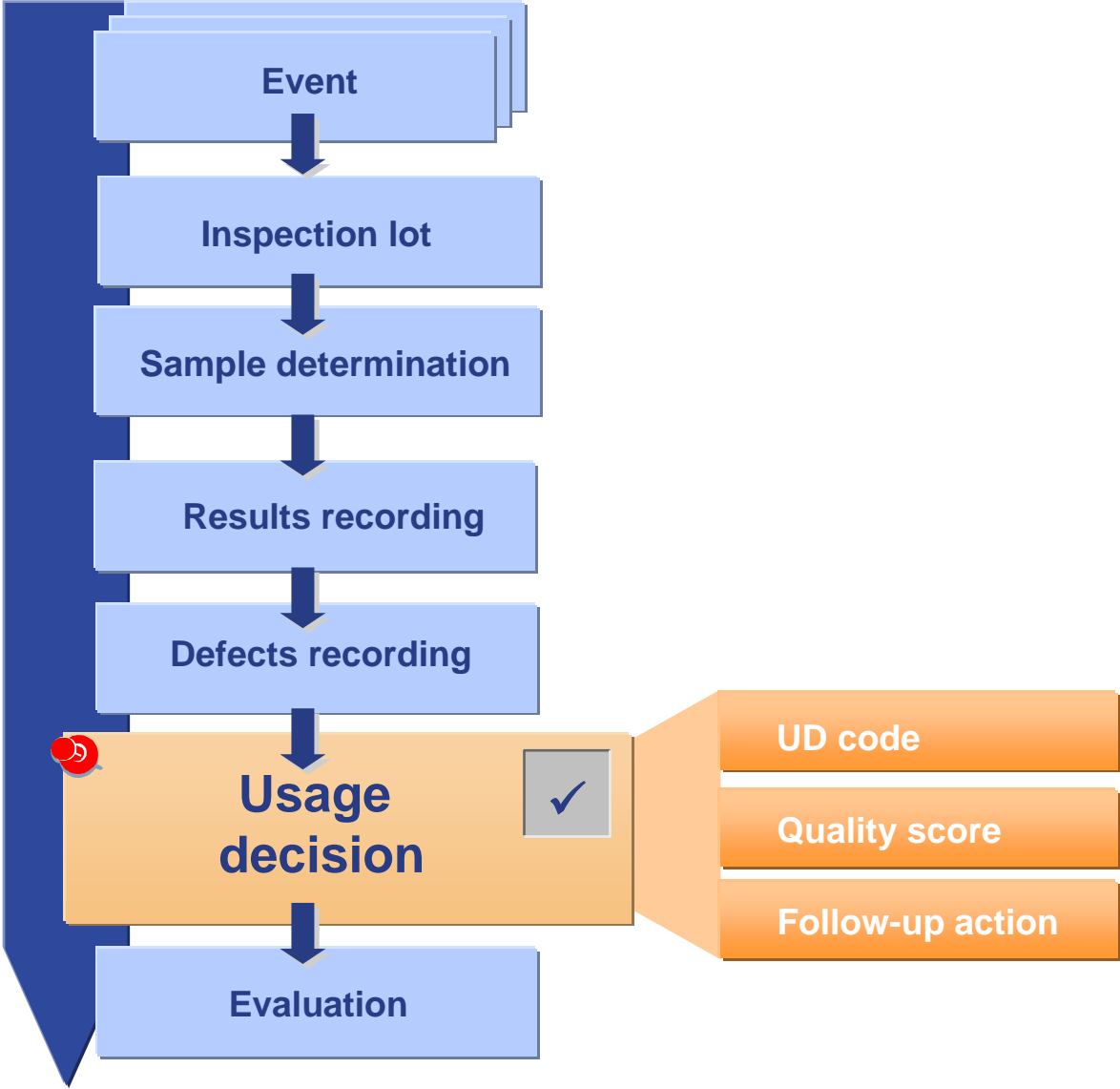
Quality notification is activated

Quality notification
Status:
Outstanding notification

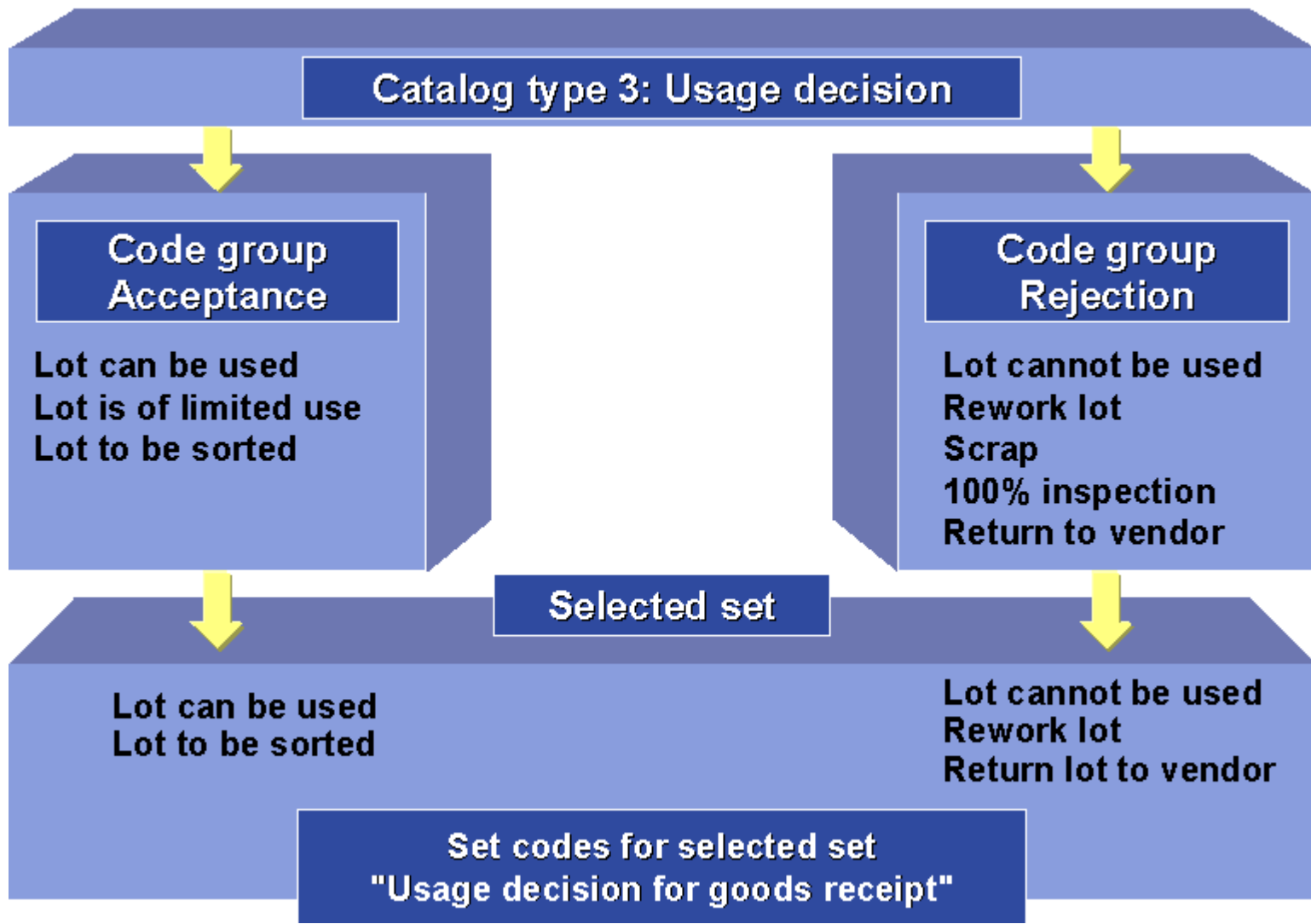
Usage Decision



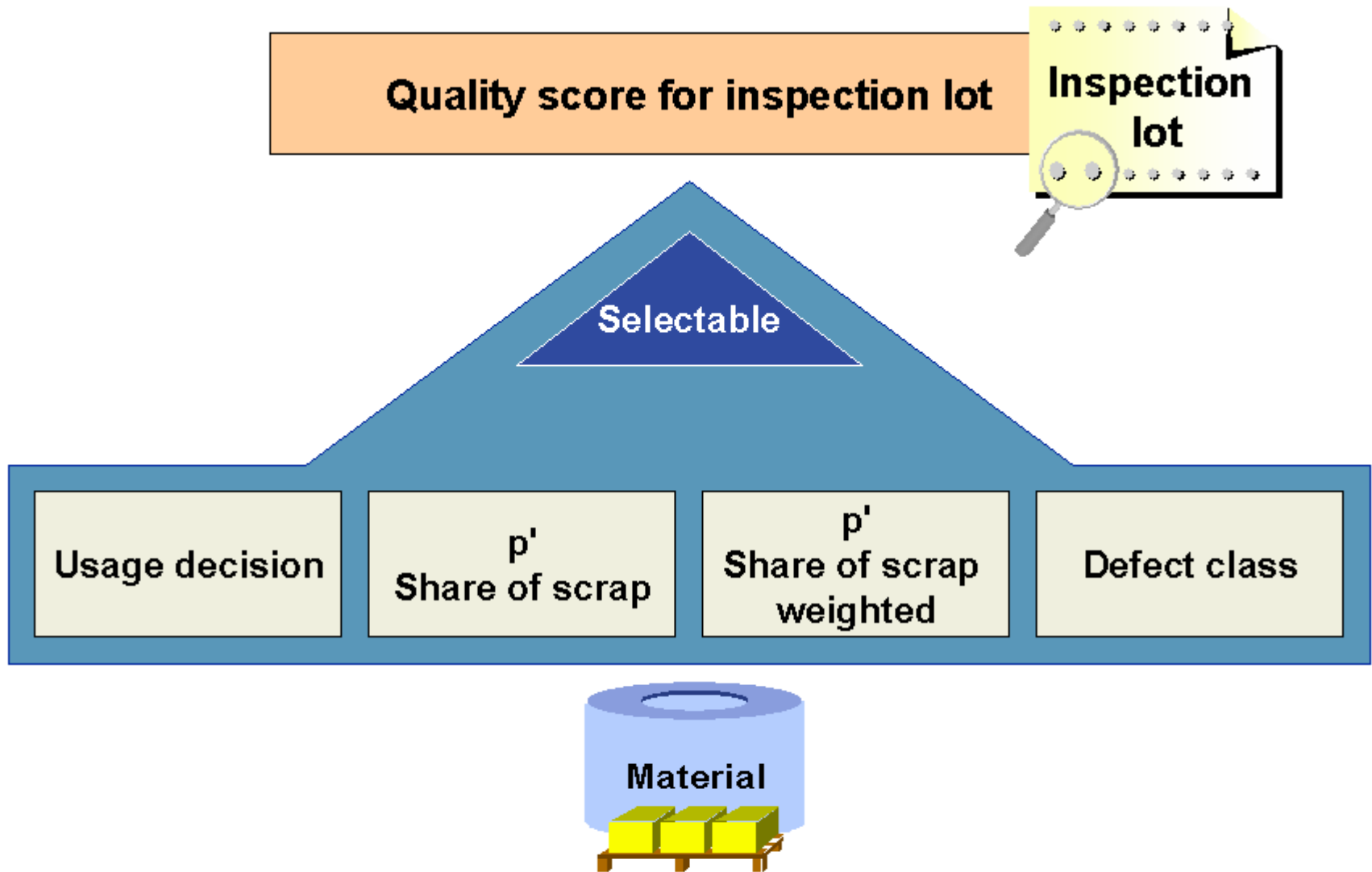
Usage Decision



Usage Decision



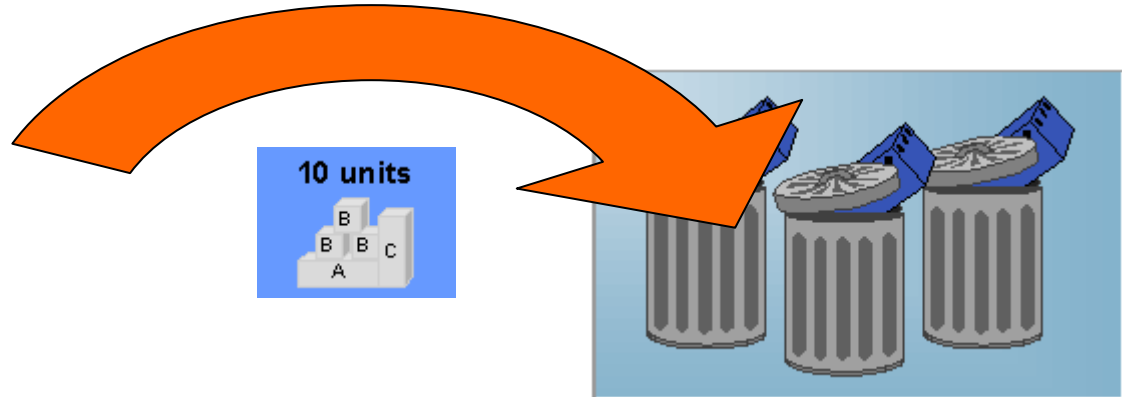
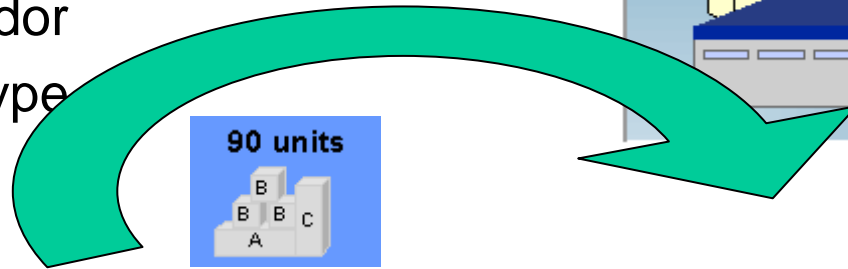
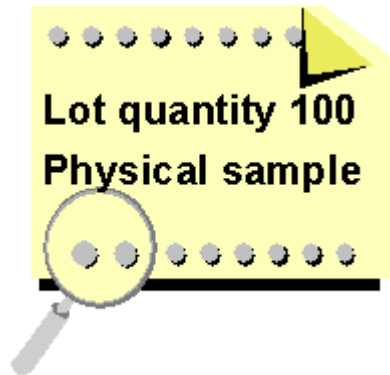
Usage Decision



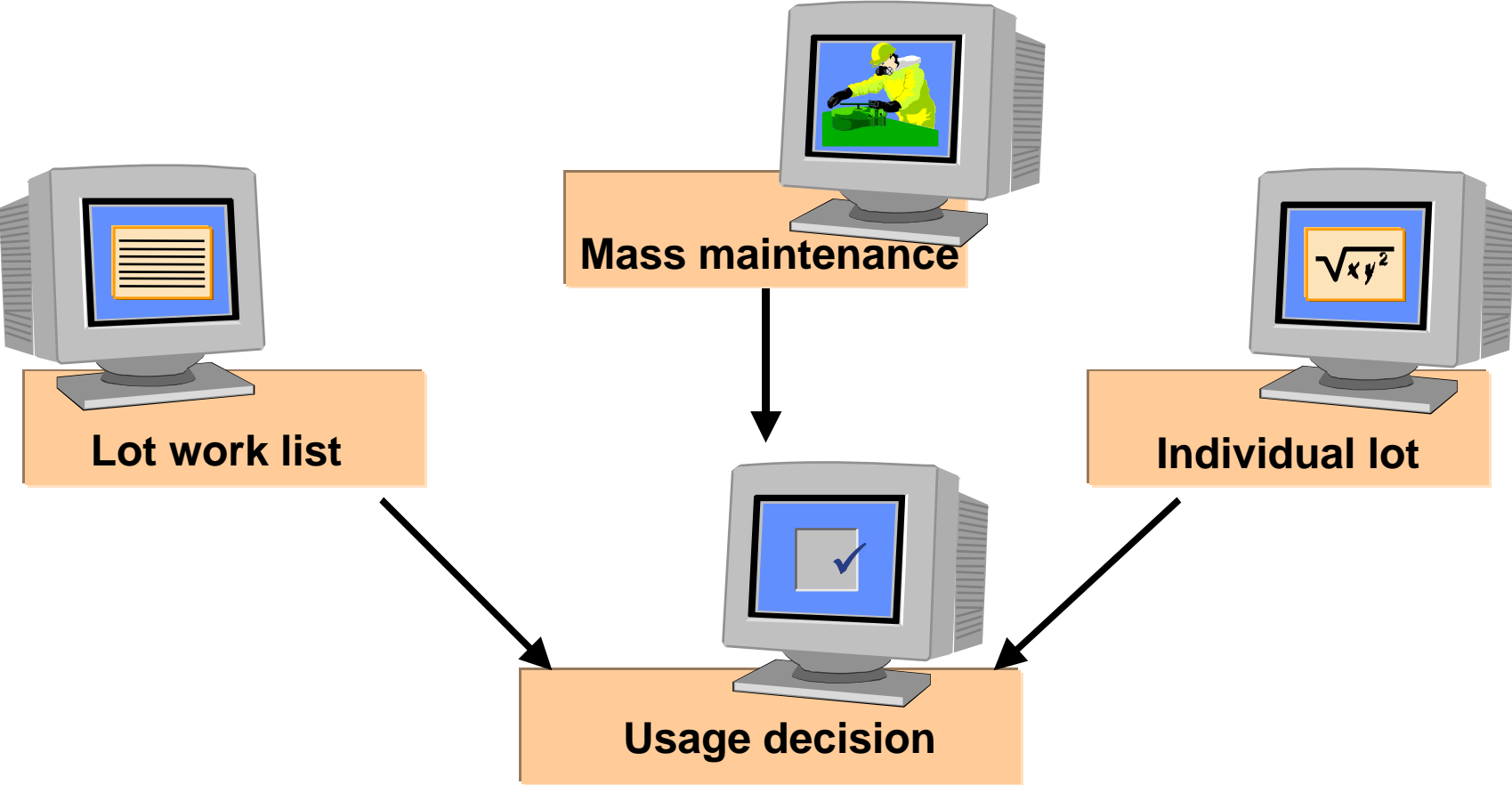
Usage Decision

❑ Automatic Stock posting

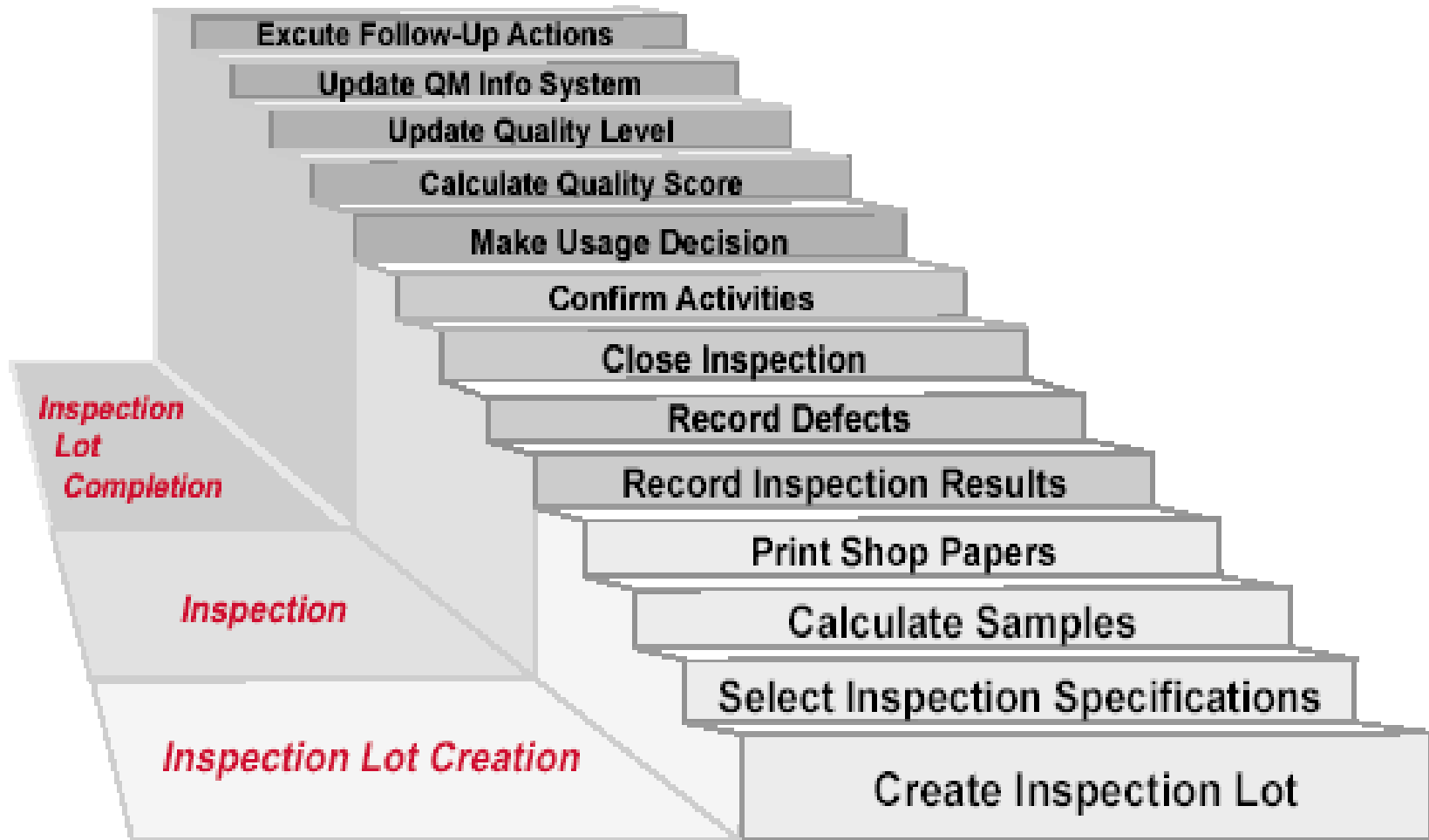
- ❖ Unrestricted stock type
- ❖ Back to the vendor
- ❖ Blocked stock type
- ❖ Scrap



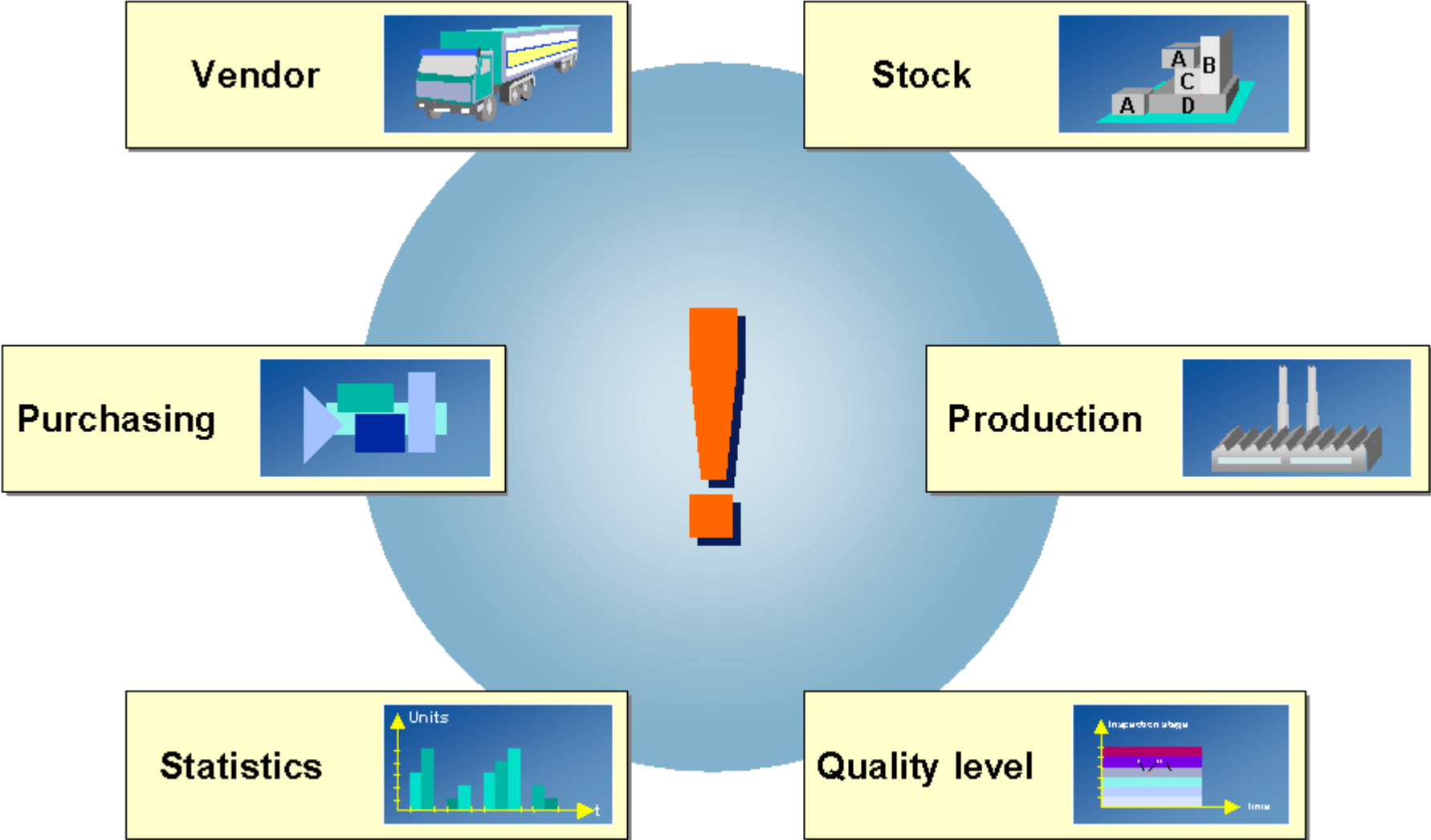
Usage Decision



Inspection lot processing summary



Usage Decision Effects



Transactions to practice

- ❖ QA01 - Create Inspection Lot
- ❖ QE01 - Results Recording
- ❖ QE02 - Change Results Recording
- ❖ QA11 - Record Usage Decision
- ❖ QA12 - Change Usage Decision
- ❖ QA32 - Inspection Lot Selection (Find)
- ❖ QA33 - Inspection Lot Selection (Enter Results / Defects / Usage)
- ❖ QE51N - Result recording



Course Summary

You should now:

- ❑ Have become familiar with the process steps involved to perform Quality Inspections in SAP**
- ❑ Be able to create an Inspection Lot**
- ❑ Be able to record Results and Defects**
- ❑ Have entered a Usage Decision**