Quality Management

for Microsoft Dynamics 365 Business Central

Every company requires some sort of measurement of their processes in order to review how effective and efficient these processes are so they can say something about the quality of their business.
Quality Management can be applied in many situations as per the examples below:

→ **Quality samples in purchasing, production, assembly**
  Determine a sample size and inspect sample as per specification.
→ **Process registrations**
  Record values at specified points in a process. Collect user inputs.
→ **Inspection check lists**
 As part of a maintenance plan
→ **Issue registration**
  Create an issue from a project or following on the registration of a customer complaint.

The process starts with defining a Measurement Template which is linked to a specific table. In this template the "snapshot" fields are defined. The Question Set (Profile) with the questions and answers for the check sheet is created as well as the Sample Method. In the process a trigger is inserted to create the check sheet from the measurement template and calculate the actual Sample size as per the Sample method. The check sheet is completed by the user and in the process a check is made if the check sheet is complete as well as the measurement result (Approve / Reject). The measurement is registered to be used in future ratings and reports. Process specific follow-up actions are available.
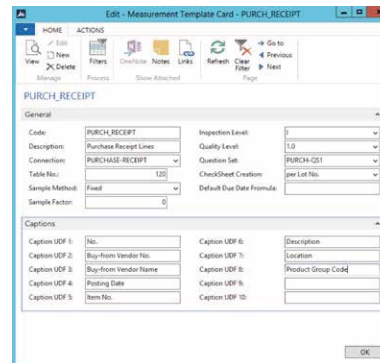
The Measurement template for the Purchase receipt
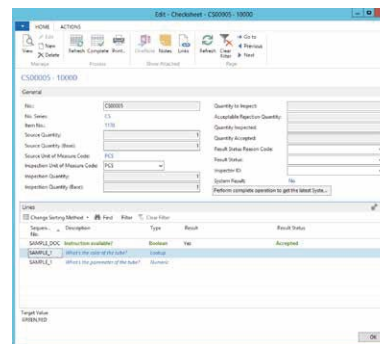
The check sheet for a receipt of 10 pcs, resulting in a sample size of 1

Benefits

→ **Flexible and all-round solution.** Define a measurement on any table in Dynamics 365 Business Central, tailor check sheets to your business process.

→ **Automatically determine sample size.** Calculation based on the Acceptable Quality Levels method where the results of the sample inspection is applied to the complete lot.

→ **Measurement registration for future analysis.** When complete a measurement is registered to build a history for future analysis.

→ **User definable check sheets.** Create Questions and Answers to be completed at measurement time. Set target values to determine Accepted or Rejected.

→ **Automatic data snapshots.** Use Business Integration Solutions to make snapshots of the data at measurement time.

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Features

Measurement template	The quality management process is based on the registration incidents, automatic as part of a process or manually through a wizard. The incident entry supports a simplified version of the 8D method - a problem solving method for product and process improvement. From the incident a measurement can be created based on a template set for specific item/vendor/customer combinations, production operations or service orders.
Measurement	The measurement is created from a measurement template. The template defines the main elements of the measurement: a data snapshot, capture up to 10 additional fields; the sampling method and size and the question set from which a check sheet is created. From the measurement check sheets are managed, when completed by an inspector they can be approved or a re-test can be triggered, the results of check sheet set the result of the measurement to either Accepted or Rejected.
Data snapshot	A data snapshot is defined in a "connection". In this connection up to 10 additional fields from the table and related tables can be mapped to the user defined fields in the measurement.
Sampling method	Determines if and how a measurement is sampled, this can either be a Fixed quantity, independent from the lot size; Percentage from the received lot or use the Acceptable Quality Level method where the sample size and results are statistically determined. The sample can be applied to the total quantity in the transaction, per Lot – or per Serial Nr. in the transaction.
Check sheet	The Question Set is made up from one or more individual questions and answers to be completed in the check sheet. The set allows the following types of questions: Boolean = good or bad; Lookup = multiple choice; Numeric = decimal value with tolerances; Text = free text. Each question can have a target value, when matched the question is marked as accepted, otherwise the question is rejected. A check sheet can also be rated where the answer has a score value and the question a weight value, the weighted average determines the rating: Good, Average, Bad.
Skip logic	You can classify items based on their turnover contribution and activity and define per class a skip pattern with which an item can "earn" a more relaxed inspection regime. When quality has proven to be consistent, one or more inspections can be skipped. Critical items can be marked as exempt from the skip pattern. A reject will result in a lower level in the skip pattern.
Registered measurement	With the AQL method the result of the measurement is determined by the system, the other sampling methods require a uses decision on Accepted or Rejected. When complete the measurement is registered and the process can be continued.
Follow up actionst	Are determined by the specific business process. In the purchase receipt process as included in the current version the follow up action allows the user to create a purchase return order.