
# CIQ 3.0 QUALITY

## DATA MANAGEMENT SYSTEM

AESA Cortaillod

**YOU WANT TO GET ORGANIZED IN ORDER TO ENHANCE YOUR YIELD:**

**BY OPTIMIZING MATERIAL USAGE WHILE REACHING AND SECURING SUPERIOR QUALITY LEVELS,**

**BY ENSURING PROPER DOCUMENTATION AND RECORDS MANAGEMENT AND BY KEEPING COSTS UNDER CONTROL**

## YOUR SITUATION

Today, a wide range of inspection technologies is available, and cable production equipment is frequently equipped with measuring devices.

However, these instruments are very often specific to one particular machine, which means that measurements are performed in separate "quality islands". Clearly, maximum benefit from the data generated by these individual measuring devices is only achievable if such "quality islands" are connected together through the company network, allowing getting a global overview of the performance of the production.

## REQUIREMENTS

- Specific solution for the cable industry (length and time-related)
- Centralized storage of standardized data and global evaluation capabilities
- Open system (data exchange with ERP, MES,…)
- Modular design providing an efficient, optimized and customized system

## OUR SOLUTION

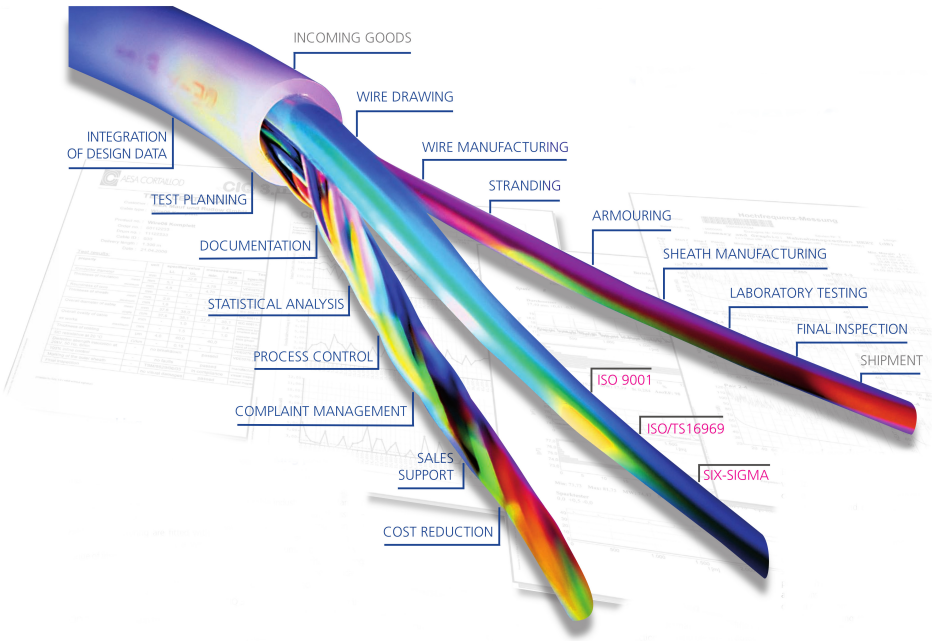
The CIQ networks all measuring and testing devices into one common system and stores all the acquired data in a central data storage / common repository. This enables all the entities involved in managing the production flow to have direct access to the process and testing data, this practically in real-time.

CIQ (Computer Integrated Quality management system) is structured in modules, providing an ideal base for tailoring it to any specific requirement:

- QUALITY DATA ACQUISITION (QDM)
- PROCESS DATA ACQUISITION (SoftDLC)
- EVALUATION AND REPORTING (QDM)
- Specific ADD ONs

## YOUR BENEFITS

- Optimal production control enabling scrap reduction
- No more expensive double testing or, on the opposite, missing tests
- Complete and comprehensive quality documentation
- Reduction of planning and testing efforts, of set-up times and of risks of human error
- Complete quality data bank supporting continuous process improvement
- A coherent and unified system maximizing production efficiency



# INSPECTION: QUALITY DATA ACQUISITION

## YOUR SITUATION

You want to consolidate and evaluate the multiple quality data scattered throughout the different “quality islands” and inspection platforms existing inside your manufacturing unit.

## OUR SOLUTION

QDM is the CIQ module dedicated to data acquisition, evaluation and reporting.

QDM allows reducing testing and evaluation efforts and provides a sound basis for improving the efficiency of production processes and for optimizing material usage. The QDM has been designed taking foremost into consideration the specificities of the cable industry.

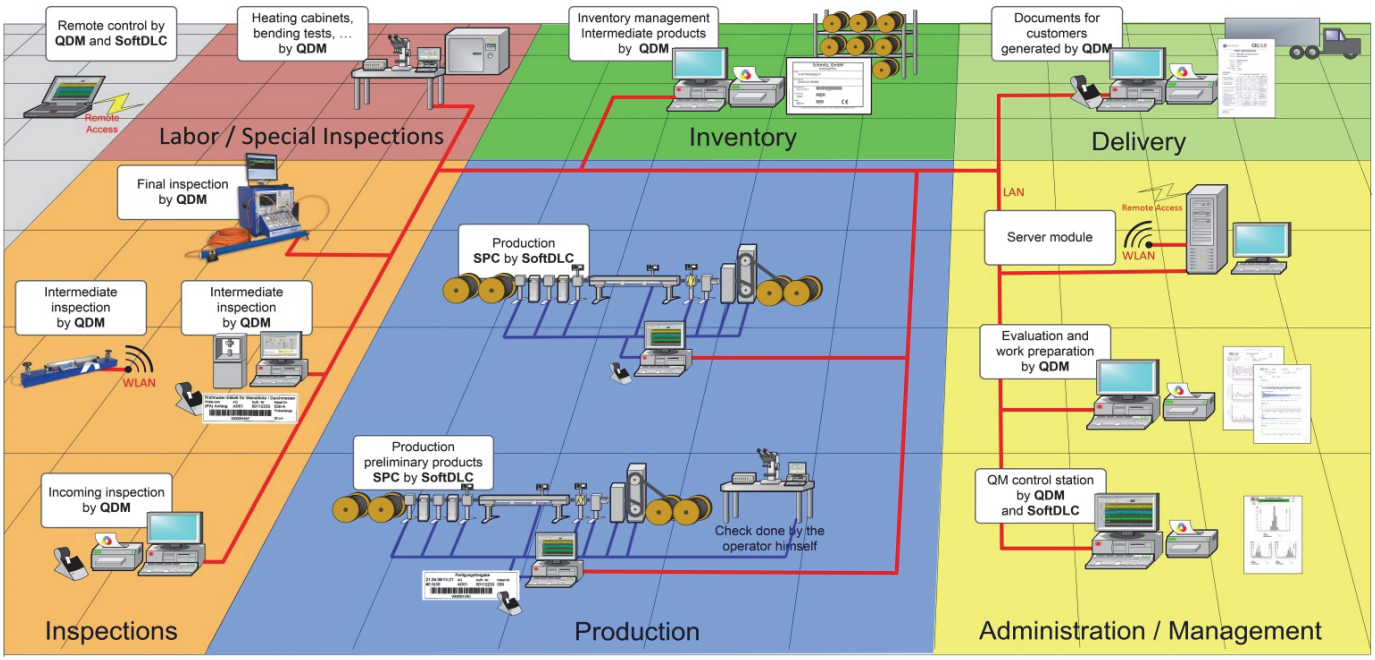
It allows the combination of test data with length-related parameters and is compatible with the most commonly used cable measuring and testing instruments. In addition, it supports a wide variety of electrical and mechanical cable testing procedures, and is fully aligned with applicable standards and test specifications.

## YOUR BENEFITS

- All the data processing is performed on the local network without requiring any external (expensive) computing system and/or time
- The results may be printed, stored as PDF files, or sent as emails. It is also possible to create data files for Office products such as Microsoft Excel
- Makes data available for external processing thanks to SQL Super Evaluation module, ADO, ODBC,…

## KEY FEATURES

- Supports testing in all factory locations (production, laboratories, test stations,…)
- Generates quality-related documents (reports, labels, certificates…)
- Computes data and automatically displays the results
- Archives raw data for SPC and traceability purposes or any potential future needs



# OFFICE: NETWORKED QUALITY MANAGEMENT

## YOUR SITUATION

You do not want only to secure product specifications, but also to improve your production by optimizing your processes and tests… this in order to boost your yield !

## OUR SOLUTION

CIQ manages all the data acquired throughout different test locations. It provides immediate access to all quality data and offers an easy way to issue documents accordingly. CIQ is not only designed to attest product specifications, but also to highlight potential savings by identifying contingent fields of improvements.

## TEST PLAN CREATION

Test specifications and the deriving test orders are the basis for specific and detailed tests, reports and any further evaluation steps.

All parameters, limit values, formulas, master data, reports, quality charts, etc. may be defined in the office already. Work instructions and drawings may then be transferred and displayed for the operating personnel on the production line. QDM manages the inspection tests according to your test plan. It makes sure that all required tests are realised and provides the operator with the right information at the right time.

## DATA STORAGE

Archiving all raw measurement values is almost impossible with standard products (especially for process monitoring or High Frequency cable performance measurement) due to the high amount of data to be managed. QDM stores all raw measurements making possible immediate or subsequent analyses and traceability. Data, test plans and test orders can be archived within the system or on any external storage media.

## REPORTING

The QDM module can be used in the shop-floor as well as in the office. QDM accesses the centralised datapool in order to issue labels or report and also to consolidate evaluations. Results can be printed, stored as pdf, send by email or exported.

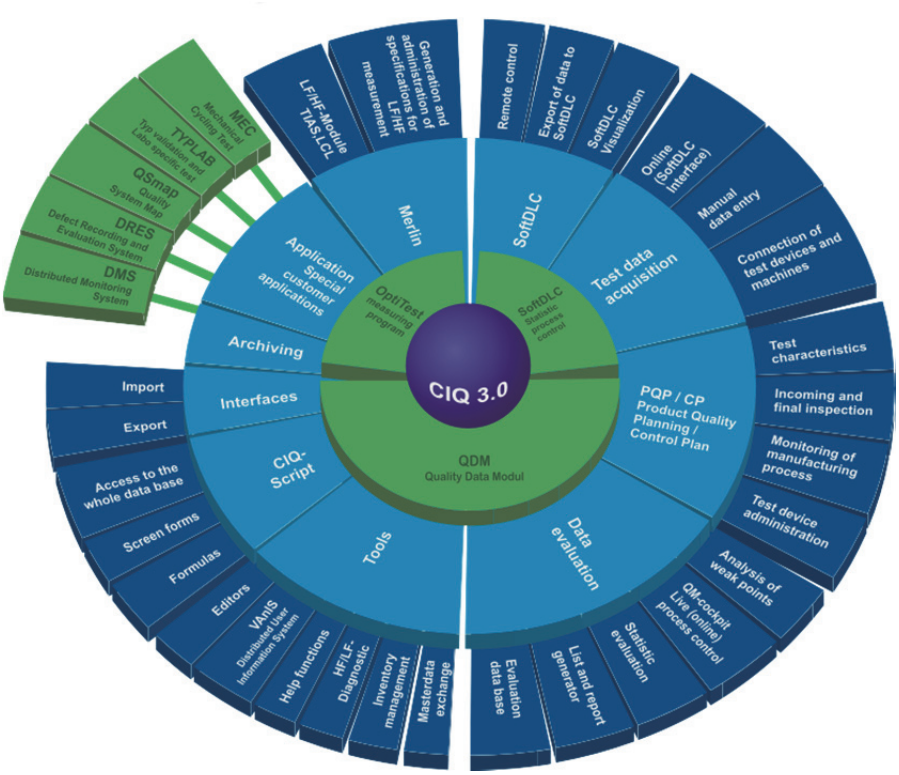
## EVALUATIONS

QDM manages all the quality data acquired through different test locations and production lines. All raw data are available for evaluation at any time. Thus, all test data of a cable can be collectively evaluated and printed. 100% backward and forward traceability is feasible with appropriate filters.

QDM can provide quality charts, periodic reports, product manufacturing cards and even more, this in order to easily identify contingent fields of improvements.

## KEY FEATURES

- Test reports and labels during the whole production process
- Test certificates and consolidated test report for your customers or end-user
- Quality charts and graphical representation supporting process improvement
- Daily and weekly reports
- Product manufacturing cards
- Individual overviews



# INSPECTION: QUALITY DATA ACQUISITION

## YOUR SITUATION

In addition to the checks performed during production, it is also crucial to conduct laboratory tests, for example when new products have to be validated.

## OUR SOLUTION

Although product development and maintenance are not directly involved in the manufacturing flow, these departments are playing key roles to ensure product quality. CIQ offers specific additional modules to effectively carry out the tasks related to these departments.

## YOUR BENEFITS

- Centralised data acquisition under a unified format whatever type of equipment is used to generate the data

## KEY FEATURES

Special modules designed for specific tasks:

- MEC: Mechanical Cycling Test.
  To perform and monitor performances during long-term tests (e. g. bending tests, drag chain tests)
- TYPLAB: Type Validation Lab Test.
  To perform and administrate specific laboratory tests
- DRES: Defect Recording and Evaluating.
  To record and evaluate defects detected during and after the production process
- DMS: Distributed Monitoring System.
  To acquire, display and store measurements from different locations (e.g. heating cabinets)
- And more …

# PRODUCTION: PROCESS DATA ACQUISITION

## YOUR SITUATION

You want to drive the process costs both effectively and efficiently. Therefore you need reliable and complete information and this in real-time.

## OUR SOLUTION

SoftDLC is the CIQ module dedicated to both process data acquisition and monitoring.

Continuously capturing process data directly on the production floor, monitoring the process and identifying trends, almost in real-time, allows driving manufacturing costs down.

Through on-line capture and visualisation of process data, trends can be recognized at an early stage during the production, allowing to proactively intervene and to take any needed preventive or corrective actions.

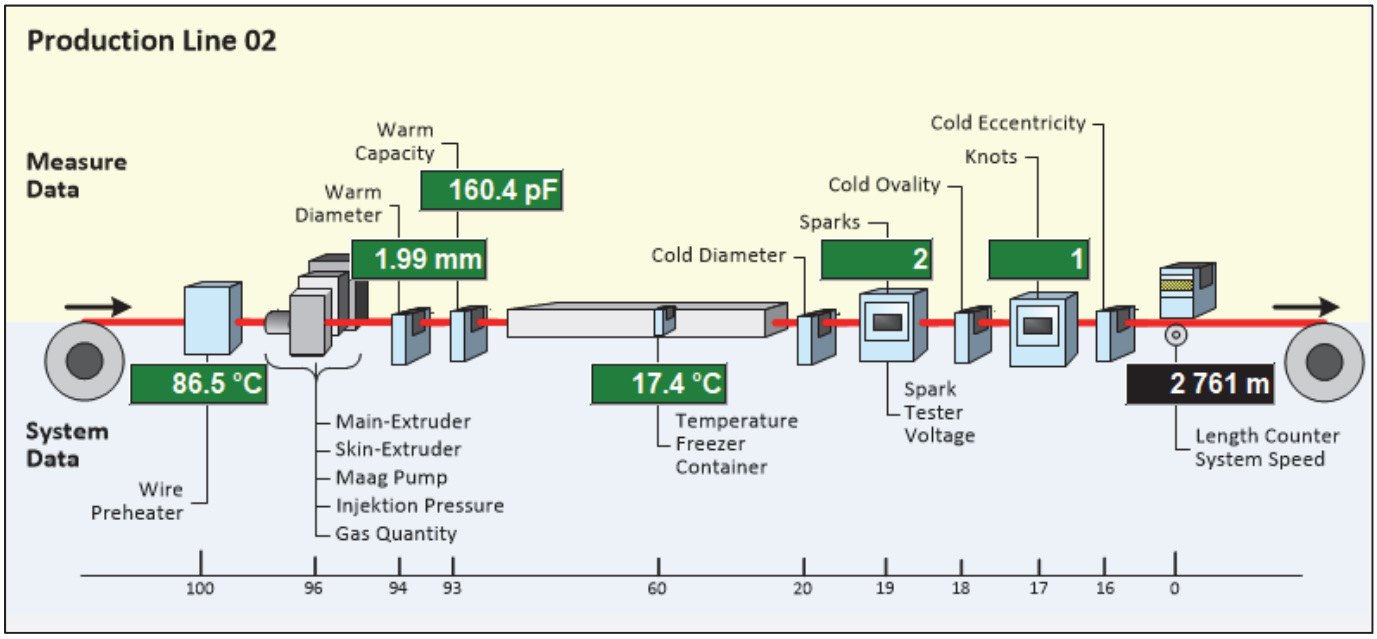
In addition, early warning systems, based on reliable and comprehensive information, allow preventing defects before they occur. Alarms are transmitted to the involved people through different configurable methods and channels.

## YOUR BENEFITS

- Only flawless material leaves the factory
- Savings by reducing scrap thanks to corrective actions before defaults are occurring

## KEY FEATURES

- Online monitoring, alarms and remote supervision also from the office
- Continuous capture of data, events and parameters of the process
- Data recording based on time and cable length
- Targeted improvement based on information from statistical process control
- Transfer to the work-floor of ERP information as well as instructions concerning machine set-up



# CIQ 3.0: AN OPEN SOLUTION

## YOUR SITUATION

ERPs or MES have limited capabilities in managing quality data. Nevertheless you want to have a comprehensive data management system.

## OUR SOLUTION

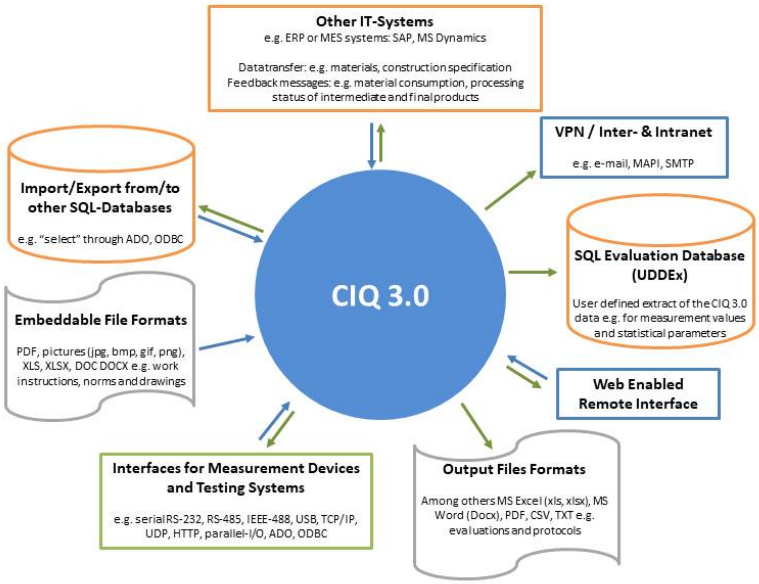
CIQ is an open system; therefore it enables data exchange with other systems and data-bases It allows also to export and import data in most of the usual formats.

AESA Cortaillod has worked in close partnership with companies specialized in cable manufacturing to offer professional, integrated IT solutions. The CIQ provides a unique, highly effective solution which can be interfaced with the most commonly used ERP or MES, for example.

## ERP / MES

Several "turnkey" solutions supporting cable manufacturing processes through standard IT applications, networked over the company's LAN, can be found on the market. These solutions, which are often complex in structure and involving heavy investments, are designed for general purposes and are covering most of the central functions that are common to a wide range of industries.

However, for the manufacturers of electrical wires and cables, the situation is particular as most of the data to be processed are not related to quantities, but to the cable length. Thus this specific type of data cannot be efficiently handled by any standard IT solution. This means that for wire and cable manufacturing, specialized functional modules are required to complete the quality management toolbox.




## REPORTING

CIQ 3.0 is an "open system" with various interfaces for data exchange.

Due to its wide range of capabilities, CIQ 3.0 can easily be integrated into existing EDP structures.

Its multiple interfaces allow connecting it with:

- Measuring & inspection devices
- ERP systems
- Import and export with SQL databases
- Communication via VPN / Internet and Intranet

## YOUR BENEFITS

- Unique system combining state-of-the-art cable and IT know-how
- Turning around the limitations of the ERPs and MES in terms of CAQ (Computer Aided Quality) while having a fully interconnected solution
- The user himself can define which data are exported or imported and in which format

## KEY FEATURES

- CIQ is specifically designed for the cable industry
- Creation of outputs in different file formats
- Integration of existing documents and files
- CIQ is the only system allowing merging and interlinking static values, from testing devices, with continuous data streams from production equipment
- 360° traceability
- Full data-exchange and interconnection capability with any device and EDP solution
- CIQ is modular system allowing full customization according to your needs

## SOME USERS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