



QualityLine



Using or only collecting?

In your manufacturing, how much data do you really use to control quality and efficiency?

In this e-book: Learn how to leverage AI Technology to collect the right data and use it to improve product quality

- **Are you using all your manufacturing data?**
or are you just collecting some for analytics? - Page 3
- **Data Integration Challenges** Faced by the Electronics Manufacturing Industry - Page 4
- **QualityLine AI Analytics** - Collecting the right data and using it to improve product quality - Page 5
- **Unlock your data for end-to-end control** - Page 6
- **The power of Artificial Intelligence** for product quality and efficiency- Page 7
- **Reduce downtime and maintenance demands** - Page 8
- **Developing in-house vs. outsourcing:** What is the most effective way to maximize the value of your manufacturing data analysis?
- Page 9
- **Specs & Contact details** - Page 10

Are you using all your manufacturing data? or are you just collecting some for analytics?

How much data are you really using to control your quality and to gain efficiencies?

It is often difficult to interface with data collection sources, and the data doesn't have a standard format as identifying the right, usable data can be challenging for electronics manufacturers.

MIT (Massachusetts Institute of Technology) estimates that 70% of data generated in high-tech manufacturing is never used. In either case, the data was not collected correctly, or the data couldn't be used.

Manufacturing data holds immense potential for improving efficiency, quality control, predictive maintenance, and overall operational excellence at manufacturing.

Analyzing data properly can solve challenges such as:

- Low quality of products
- High cost of manufacturing
- Inefficiency in manufacturing
- Bad design for manufacturability



Data Integration Challenges Faced by the Electronics Manufacturing Industry

Most factories already collect and save an enormous volume of data every day from various sources such as machinery, sensors, production lines, supply chain systems, quality control checkpoints, and more.

However, despite the vast amounts of data being generated, collected and saved, industry reports indicate that only a fraction of this data is effectively analyzed and utilized for actionable insights.



Manufacturers struggle to extract greater value from their data due to three main factors:

Endless types of data: Machines, equipment, and systems produce manufacturing data in different formats and structures.

Data Silos: Manufacturing environments often have disparate systems that don't communicate well with each other, resulting in data silos. These silos make it challenging to aggregate and analyze data comprehensively.

Overwhelming Data Volumes for business analytics: The high volume and velocity of data overwhelm existing systems and processes, making it challenging to extract valuable insights in a timely manner.

QualityLine AI Analytics

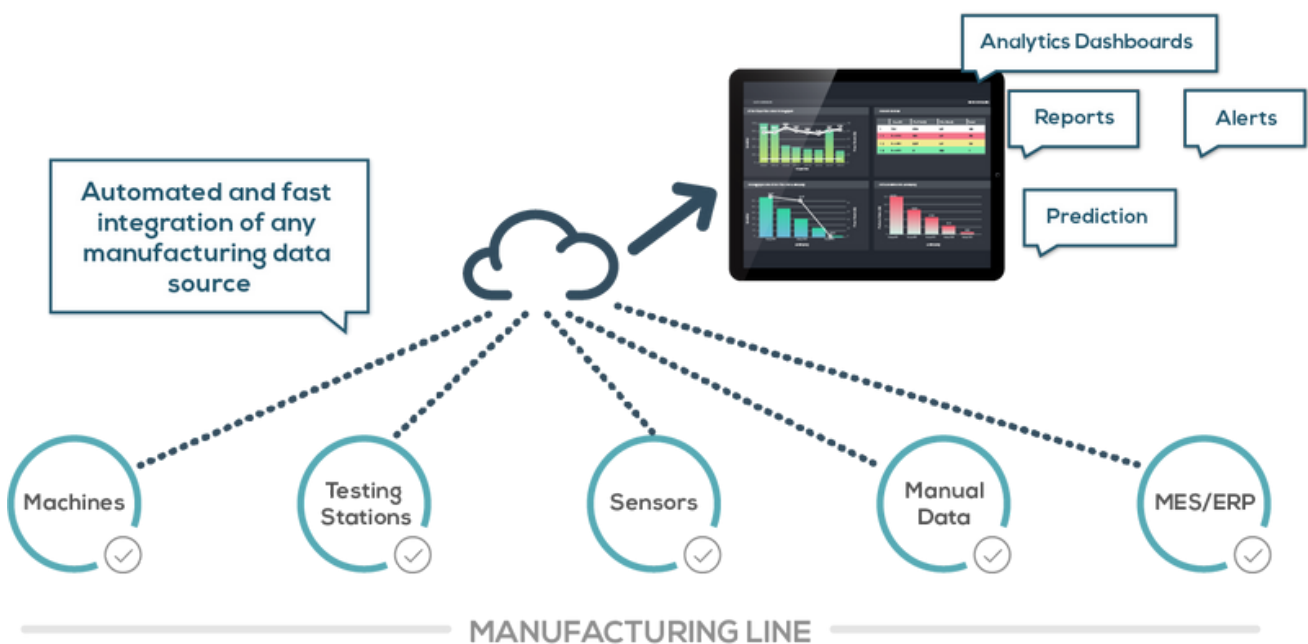
Collecting the right data and using it to improve product quality

Utilizing the right data is essential to maximizing manufacturing efficiency.

When it comes to collecting and filtering data, how do you know what is useful or "smart" information and what is junk data? QualityLine automatically integrates, analyzes, and visualizes all your manufacturing data in one format digital twin.

Using the right data from production improves product quality and manufacturing efficiency.

Automated integration of multiple data sources to create usable data



Integration (one time)

- 01- Define the required data for collection and usage
- 02- Identify the relevant data in ANY data format
- 03- AI Data mapping
- 04- Automatic creation of Data capture tool
- 05- Data capture tool remotely installed in factory



Continuous usage

- 01- Data capture tool automatically collects all types of data and converts to unified format
- 02- Data capture tool automatically encrypts and push data to on premise server or to cloud
- 03- Automatic data Analysis using QualityLine algorithms
- 04- Data automatically visualized in interactive analytics dashboards

Unlock your data for end-to-end control

Learn how to leverage QualityLine AI Technology to collect all the necessary data **to improve product quality and manufacturing performance**



QualityLine AI technology is able to collect any type of manufacturing data from any data-source with any data structure from any factory worldwide. Once we have identified the data the solution runs an initial scanning process, via our pattern recognition technology, on each data structures and automatically identify the location of the data fields that are relevant for the analytics. The automated process will enable to map each and every existing data structure.

We will enable the data capture tool and it will continuously capture in real-time the data in read-only mode, from each data structure, unify and harmonize all the data in a global digital unified database.

From here AI Manufacturing Analytics dashboard is delivered to customers powered by automated anomaly-detection, root-cause analytics, cross-process analytics, prescriptive and predictive capabilities.

In other words, QualityLine delivers a holistic view of all your factories' data. The technology seamlessly brings all your data sources to one single point, which will enables to generate intuitive dashboards and reports with key quality KPIs and metrics like First Pass Yield, testing equipment performance, failed tests, retests, and claims.

Our AI Manufacturing Analytical capabilities will offer Manufacturing companies deep detailed insights, with powerful drill-down capabilities, to a single component level, into how and where to improve your quality and production, generating great efficiencies and important cost savings.



Financial value of QualityLine AI Analytics : ROI from 4 to 7 months



Contact Us

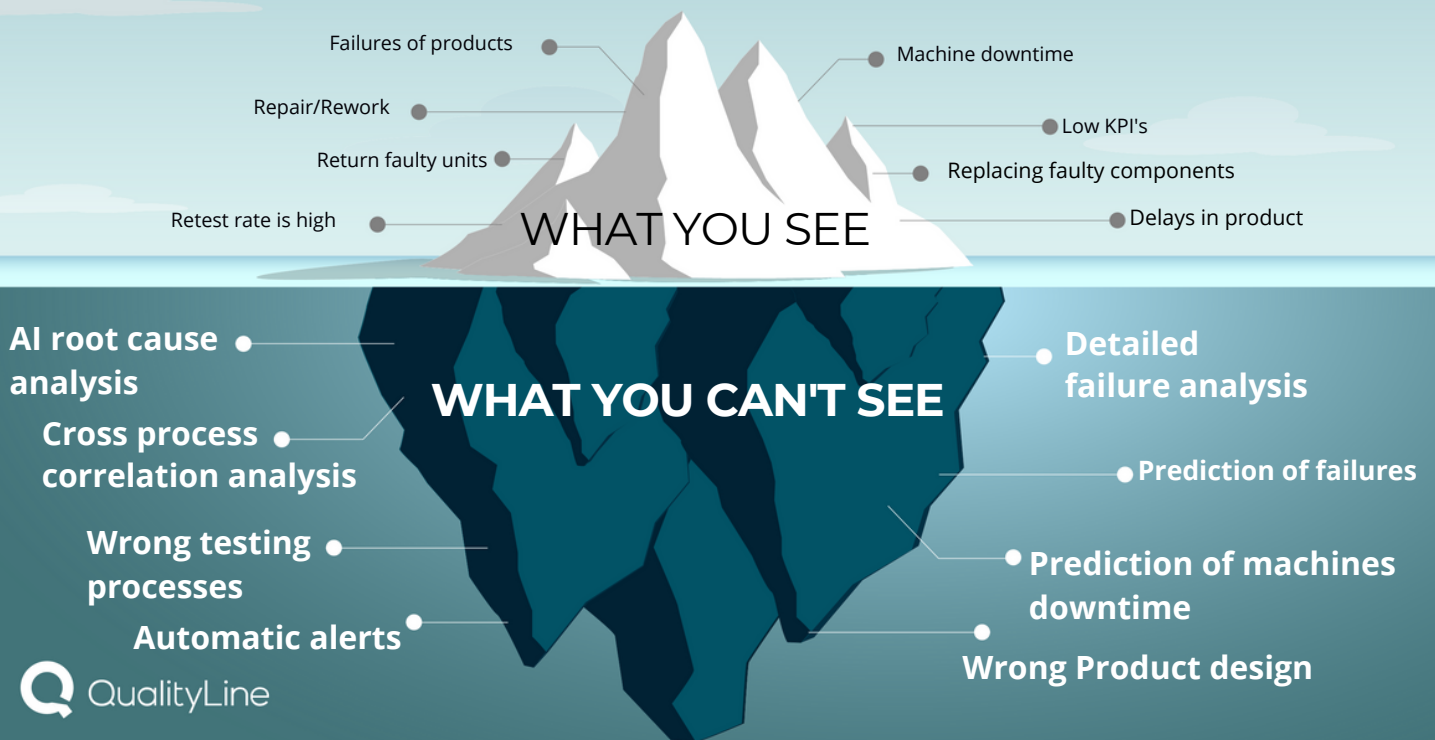
info@quality-line.com

The power of Artificial Intelligence for product quality and efficiency

QualityLine's AI automated and fast integration of any manufacturing data source offers a real-time data collection and analysis.

The software AI pattern recognition technology uses algorithms that will automatically analyse the data which is continuously accumulated during the manufacturing process from any data structure.

What you can only see through QualityLine analytics



With QualityLine, manufacturers can use data intelligently to improve product quality and manufacturing efficiency

QualityLine's end-to-end control solution enables teams to see manufacturing problems that they were not able to see before to better control the manufacturing lines and make important decisions.

Reduce downtime and maintenance demands

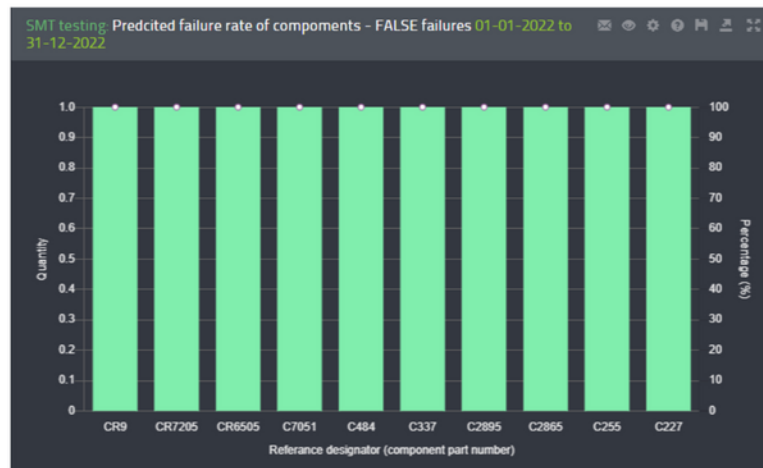
Prediction Models and Automatic alerts by addressing the right data from production

Predictive Maintenance Analytics can help manufacturers track every detail of a workflow in real time, reducing machines downtime.

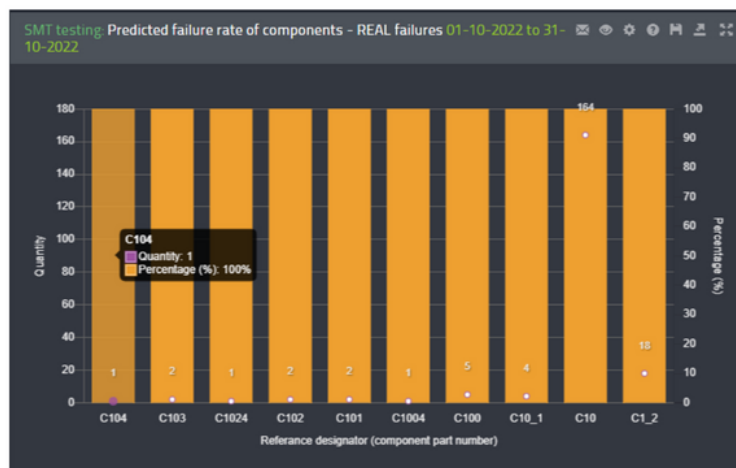
Manufacturing pain points as downtime are being addressed with predictive analytics. By collecting more data is enhanced by connected real-time devices. and making correlations, predictive analytics becomes more accurate.

Manufacturers that fail to analyze the data from production equipment and adequately predict machine performance are likely to face breakdowns that happen suddenly and cause a massive hit to productivity. Those costs could result in lost revenue opportunities, lower efficiency and productivity, quality issues, and more.

Prediction of failure rate of components - **false failures**



Prediction of failure rate of components - **real failures**



Developing an in-house Vs.using an external data integration and analysis solution

What is the most effective way to maximize the value of your manufacturing data analysis?

The issue is that existing manufacturing data integration solutions are very expensive and lengthy, as part of the process is done manually by team members and professionals that need to allocate resources to do repetitive tasks such as exporting numerous spreadsheets that have the data locked in history to organize into a BI analytics system.

It takes years of experience and special coding skills to create a solution that will solve the data integration challenge and then there is the need of converting the data into useful insights.

The technology must combine precise knowledge of the production processes, machinery and equipment used in the process, as well as the process itself and workflows.

You may think about developing an internal solution instead of adopting a software but the process is followed by years of trial and error on software development to work precisely and operates at large scale.

In the short term, actionable results will be achieved faster using QualityLine technology.

QualityLine Technology will help you to solve:

- **Time delivery**- QualityLine solution is ready in few weeks
- **Real-Time Analysis** - AI manufacturing analytics algorithms and predictions models will analyse your data in real time.
- **Flexibility** - New data structures are automatically harmonised to the Digital Twin database.

SPECS



Security :The digital twin unified data based can also be installed in the customer's cloud.



Certification: QualityLine is certified for ISO-27001 (data security)



Contact Us

info@quality-line.com



AI Analytics to improve quality and efficiency in manufacturing



AI Automated technology powered by automated integration process with the factory data. No API is required.



Harmonization and unification the factory data. No changes at existing data structures are required.



AI technology to analyze the factory data & Visualize the BI Analytics for the factory.

CONTACT QUALITYLINE

In case you have any questions regarding how to use AI analytics for quality and efficiency improvement or to simulate your ROI please contact us at: info@quality-line.com

Quality-line.com



Contact Us

info@quality-line.com