



## Powerful AI applications with automated image processing

**COMI** *We enable AI  
in a smart way*

**Rutronik and collective mind join forces for AI solutions tailored to industry and retail. Expertise in the distribution of components meets AI-based know-how in the seamless tracking of goods and their processes.**

In the field of Computer Vision, collective mind brings extensive expertise in the development of AI-based image recognition and image processing applications.

### The benefits at a glance:

- Camera images are evaluated in a manner similar to human vision
- Machines recognize their environment and processes
- Autonomous and intelligent interpretation enables responses to different events

With the first AI safety system from collective mind certified in Germany, you benefit from camera-based object and process recognition in your production environments.

### And there is even more potential in Machine Vision!

The use cases on the next two pages show the benefits for logistics and quality control.



## Take advantage of powerful camera-based AI applications

Rutronik and collective mind have launched their first projects to capture product-relevant and delivery note-related information using Machine Vision. Thanks to traceability, logistics benefits from more speed, accuracy, and a higher degree of automation.

### Initial situation

- Complexity in goods receipt due to a wide variety of products and formats as well as documentation standards cause increased manual activity
- Visual impairment to the point of partial illegibility of documents, e.g. QR codes, make automatic capture difficult
- 24 percent of QR codes are unreadable
- Changing lighting conditions from very strong to very weak with interfering reflections are not ideal for scanning projects

### Goal

- Speed up processes, reduce manual steps and minimize susceptibility to error
- Optimize QR code reading rate (standard approx. 75 percent)
- Read multiple codes simultaneously

### Deployment

- No need to customize environments and workstations to achieve automated capturing
- Optimize QR code reading rate to 99.8 percent
- Capture and validate bills of lading up to 10 times faster and with more information
- Automatic reconciliation of data management details (ERP interface)

### The Solution

The AI solution uses real-time images from an industrial camera to recognize and count goods or delivery notes, and to read, complete, and store all the information from the labels.

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Joining forces in enterprise resource planning and automated image processing to create powerful AI solutions for industry, logistics, retail, and more.

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## Streamline quality management with automated anomaly detection

In addition to AI-based article and delivery note scanning options for real-time traceability, collective mind's Machine Vision expertise also takes quality management, and specifically anomaly detection, to the next level.

### Initial situation

- Manual sample-based visual inspection is inadequate and time consuming
- Competitive QM products require input from historically collected defect types
- Extremely high number of different, complex, known or unknown defect types makes it difficult to predefine and up-to-date rules and reference values for anomaly detection
- Analysis to draw conclusions about the causes of defects
- Traditional systems typically only check individual parameters (e.g. temperature, pressure, dimensions) separately

### Goal

- Minimize manual visual inspection effort
- Eliminate the need for spot checks
- Faster, more efficient conclusions about the causes of defects

### Deployment

- Automated, AI camera-assisted testing is more efficient and more robust
- AI solution learns with normal and good parts, no input from already existing or known defect types or anomaly parts necessary
- Automated conclusions about the worn tool involved in the machining process („predictive maintenance“)
- Combination of various measurement parameters and sensor data (radar, LiDAR, ultrasound) simultaneously possible („sensor fusion“)

### The Solution

Quality management currently works with defect types. AI-based anomaly detection enables inspection based on normal and good parts.

Learn more  
about the partnership



Contact us to discuss your project: [info@collectivemind.de](mailto:info@collectivemind.de)



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