" This solution combines two procedures: An extensive global database ensuring robust, stable object recognition and a self-learning mode for quick adaptation of local products."

Robert Reiss
Director Global Product Management
Product & Portfolio Management
Bizerba

INSIGHT

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AI-based Object Recognition: Minimizing sales losses

Less fraud and more customer convenience at self-service scales

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APPLICATION
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AI-based object recognition in the self-service area for fruit & vegetables
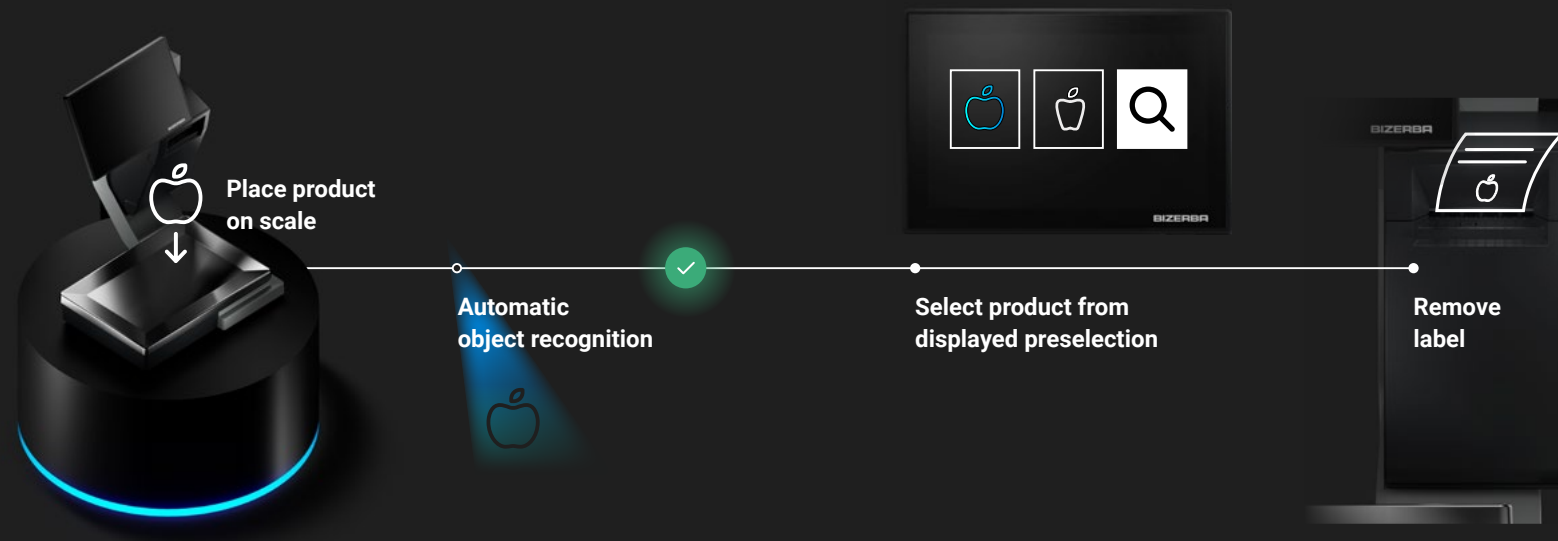
Growing assortments under control
More customer convenience and fewer losses due to incorrect registrations: The fruit and vegetable assortments are growing – with organic variants, with regional and seasonal products, with ever new exotics, rediscovered old varieties and much more. In view of this product variety, it quickly becomes confusing for shoppers at self-service weighing due to long article lists or many article numbers.

Less loss due to false registrations
AI-based object recognition at self-service scales is the perfect answer: shoppers place the products and a pre-selection of suitable products appears on the display. With a tap of the finger, the correct article can now be selected. This pre-selection reduces accidental and intentional false registrations.

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Intelligent operating convenience for shoppers

It has never been that easy for your customers: Offer them intelligent operating convenience without manual article number input. Automatic object recognition is getting better every time thanks to artificial intelligence (AI).

Place product on scale

Automatic object recognition

Select product from displayed preselection

Remove label

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The holistic Bizerba solution

You may use our AI-based object recognition
with different Bizerba scale models and
matching retail software.

Bizerba scale models working with
AI-based object recognition:
· **K3 800** – camera, optional
· **MC II 500 Pro** – camera, standard
· **XC II 800 Pro** – camera, optional (without fig.)

Bizerba Software required for
AI-based object recognition:
· **RetailApp ObjectRecognition**
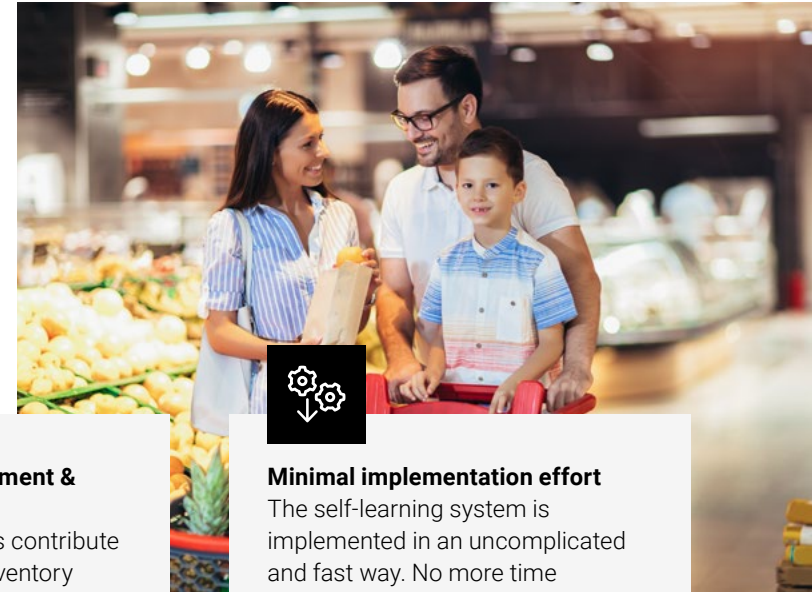· **RetailPowerScale** or **RetailStore**

MC II 500 Pro

K3 800

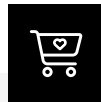**BIZERBA**

Advantages all along the line

AI-based object recognition reduces sales losses resulting from wrong registration while improving the shopping experience – simply thanks to artificial intelligence.

Less sales losses due to wrong registrations
Sometimes considerable damage in retail is caused when shoppers enter the wrong product during weighing. Reduce such losses:
- Active display of a suitable product preselection for the product placed on the scale.
- Due to product preselection less risk that lower priced products are entered intentionally or by mistake.
- Less label waste from discarded labels by avoiding mislabelling.

More shopping convenience & time savings
Intelligent support makes self-service weighing easier particularly with a large assortment saving shoppers a lot of time – time that customers can spend better for further shopping:
- Automatic identification of the applied products via the integrated camera system.
- Easy product selection with a displayed list of suggested products in the customer display.

Efficient order management & more sustainability
Fewer false registrations contribute to the optimization of inventory management and thus to food waste reduction. For example:
- Customers often register the cheaper, conventional bananas instead of organic bananas. The cheaper bananas are then reordered, although organic is more in demand. The cheap bananas are left lying around and spoiling.
- Object recognition ensures more needs-based order management with less food waste, lower costs and greater sustainability.

Minimal implementation effort
The self-learning system is implemented in an uncomplicated and fast way. No more time consuming teaching. Thanks to an ever growing global data pool, recognition accuracy increases automatically:
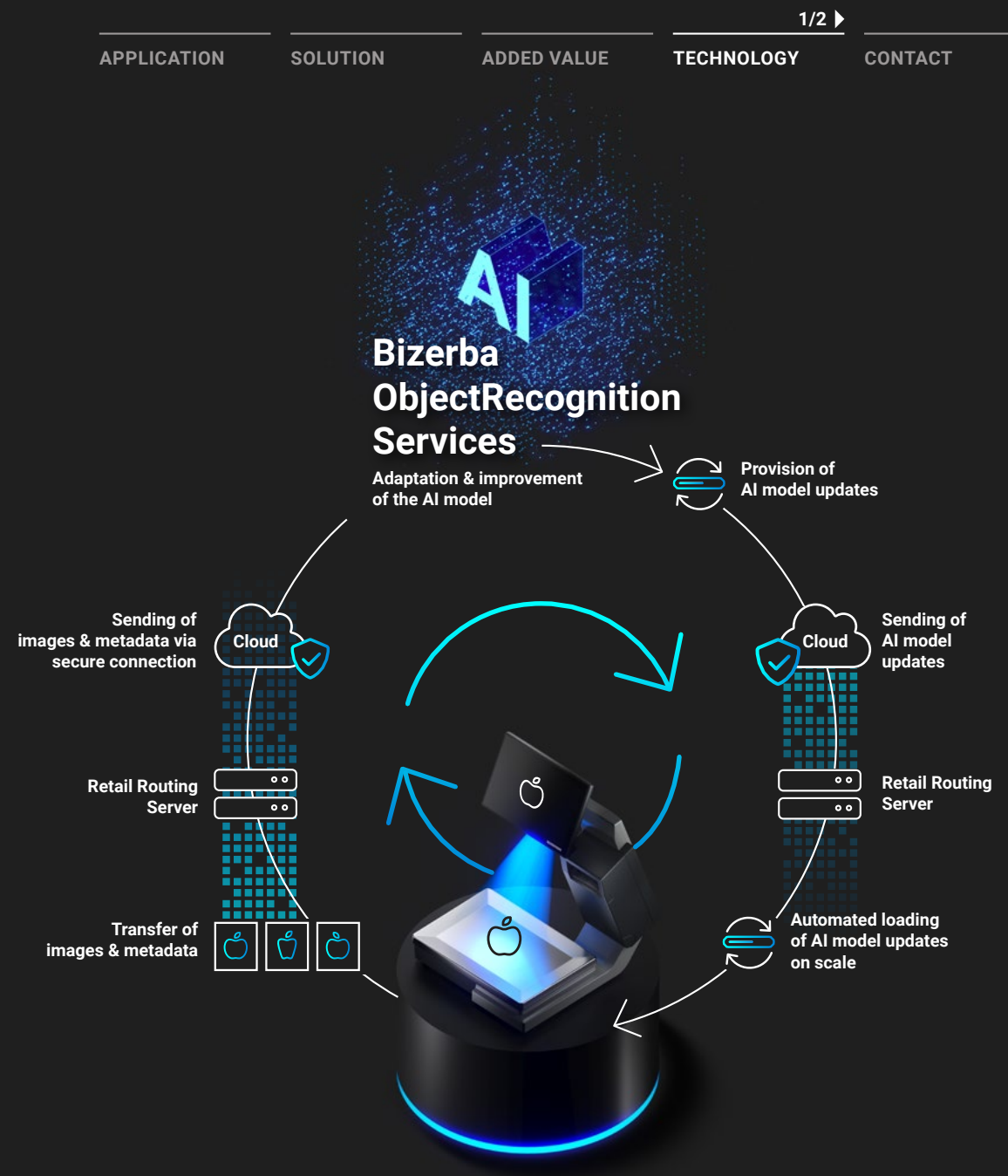- Data collection from all connected devices worldwide.
- Automated and central data distri-bution to all connected devices via Bizerba Retail Routing Server – all connected systems benefit from the system's self-learning intelli-gence of the AI model.
- Constant improvement of model and recognition accuracy through regular model updates and a permanently growing central data pool.

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And this is how it works: The technology behind the solution

Camera images from all globally connected scales are collected and stored securely in the Bizerba Cloud.

With the integrated Bizerba services, the data model is centrally further developed and trained by analysing collected images. On this basis, automatic article number mapping takes place. Your benefits: No long learning time and a noticeable relief in self-service.

Benefit from an enormous, global data pool and use the existing data model from day 1. Other connected scales have already collected the corresponding images and trained the data model. No time-consuming teaching of your new products as they will be recognized thanks to the data model.

Bizerba ObjectRecognition Services

Adaptation & improvement of the AI model

Provision of AI model updates

Sending of images & metadata via secure connection

Cloud

Sending of AI model updates

Cloud

Retail Routing Server

Retail Routing Server

Transfer of images & metadata

Automated loading of AI model updates on scale

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Best of both worlds: cloud & offline

The AI-based Bizerba object recognition solution links the connection to the cloud with an offline self-learning mode working locally on your scales.

Advantages of cloud mode

Time & resource savings in assortment maintenance: No more time-consuming manual entries when assortments change thanks to automatic article number mapping.

Transfer across scales: Locally collected knowledge is automatically transferred to other devices in the department.

Central management & updates: Model updates are centrally managed and automatically loaded.

Ongoing model improvement: The model constantly improves and expands as a result of a permanently growing data pool. Recognition accuracy is becoming better every time.

Advantages of offline self-learning mode

Individual product classification: By building up local knowledge, individual products of a higher product class can be learned and differentiated directly on the scale in the individual customer environment without time-consuming training.

Offline use: Already trained models can be used immediately offline.

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Learn more about our solutions here
ObjectRecognition (bizerba.com)

Marius Kostezka
Product Manager Retail Software

M   +49 173 548 32 38
marius.kostezka@bizerba.com

Bizerba SE & Co. KG
Wilhelm-Kraut-Straße 65
72336 Balingen
Germany

bizerba.com

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