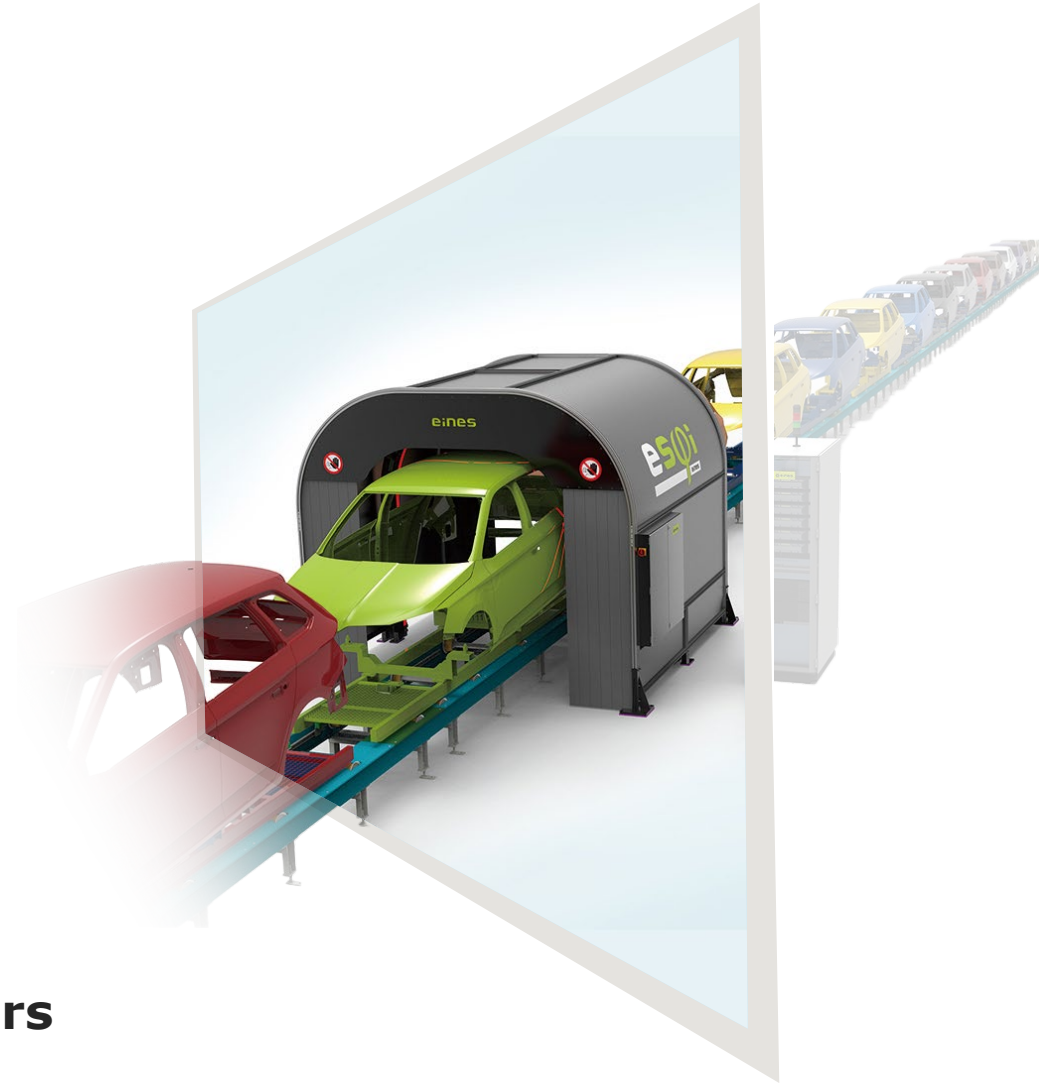
KONICA MINOLTA 150 YEARS

New Areas in the Sensing Business

Automotive Visual Inspection Business



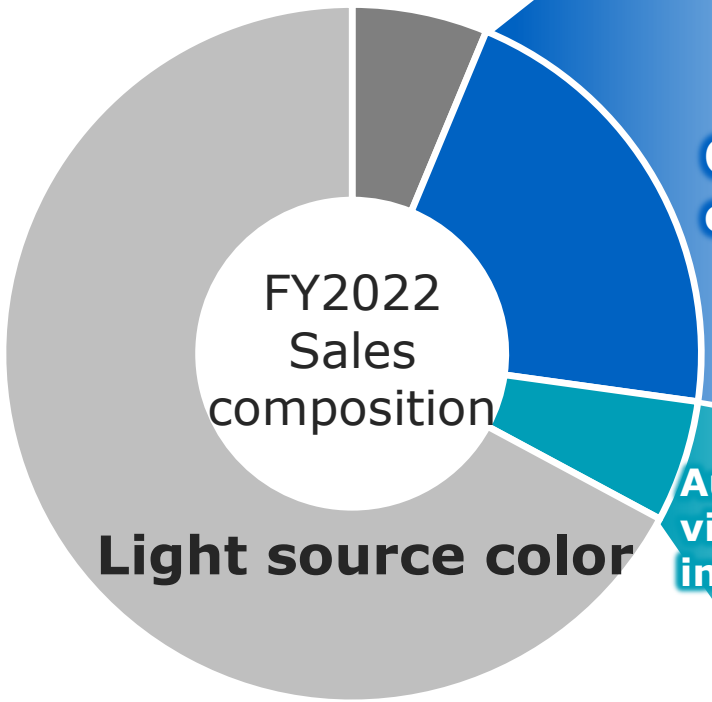
October 10, 2023

Kentaro Mikami

Corporate Vice President

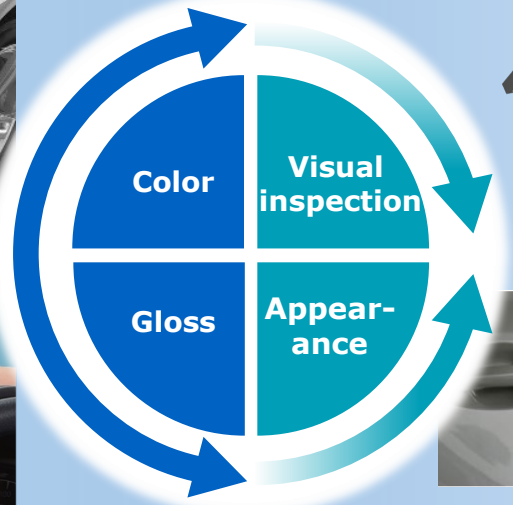
Division President of Sensing Business Headquarters

Positioning of Automotive Visual Inspection Business in the Sensing Business

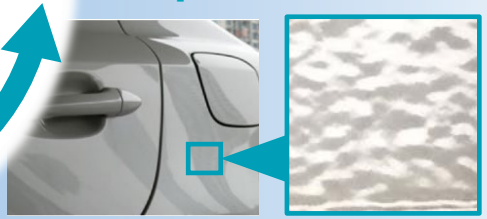


Expanded value offered in the automobile and visual inspection field and the appearance field in the object color area

Core business fields



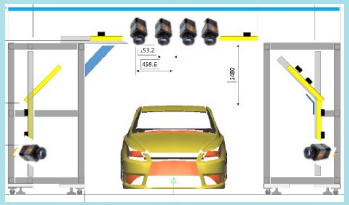
Expanded fields



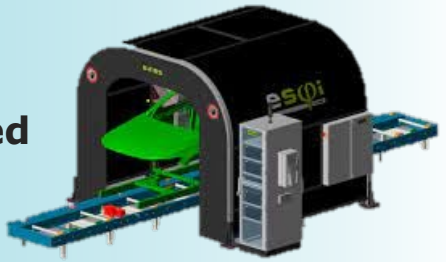
Started the automotive visual inspection business around 2015

Accelerated business expansion through the company acquisition in 2019

In-house developed system



System developed by Eines



HSI*: Hyper Spectral Imaging

Overview of Eines Systems S.L.

Founded: 1992
Headquarters: Valencia, Spain
Number of employees: 104 (as of July 31, 2023)

Leading company of automotive visual inspection systems
Supports quality assurance of more than 8 million major automakers' vehicles a year by leveraging their extensive insight into automotive factory automation and product development capabilities tailored to customer needs

Joined
Konica Minolta Group in 2019

Value offered for customers

World-class automotive visual inspection quality

Enhance brand image through improved quality

Improve customer satisfaction for auto companies

Concluded an acquisition agreement between Konica Minolta and Eines

Eines Systems Company History

KONICA MINOLTA 150 YEARS

1 Founding period
Developed customer-focused value in Valencia, Spain

2 Growth period
Captured major European customers using the success in Spain as a springboard

3 Expansion period
Expanded globally under the umbrella of Konica Minolta

1992 Founded as a start-up company with 5 founders

Ford Valencia

2000s

2019
Joined Konica Minolta Group

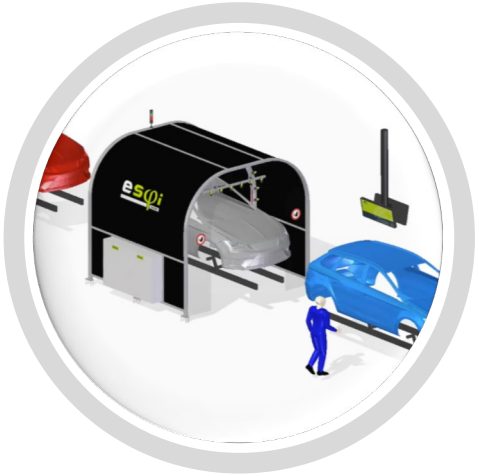
KONICA MINOLTA

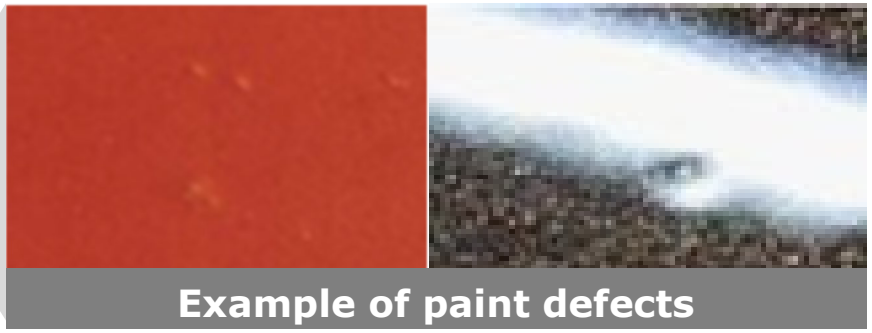
Automotive Visual Inspection Business: Major Solutions

KONICA MINOLTA 150 YEARS

esφi

Tunnel-type inline
Surface Paint Quality Inspection System





Example of paint defects

eiφiS

Tunnel-type inline
Flush and Gap Inspection System

Example of Flush and Gap

esφi = “EINES® Surface - Paint Quality Inspector”

eiφis = “EINES® Inline Flush & Gap Inspection System”

Automotive Visual Inspection: Customer Challenges

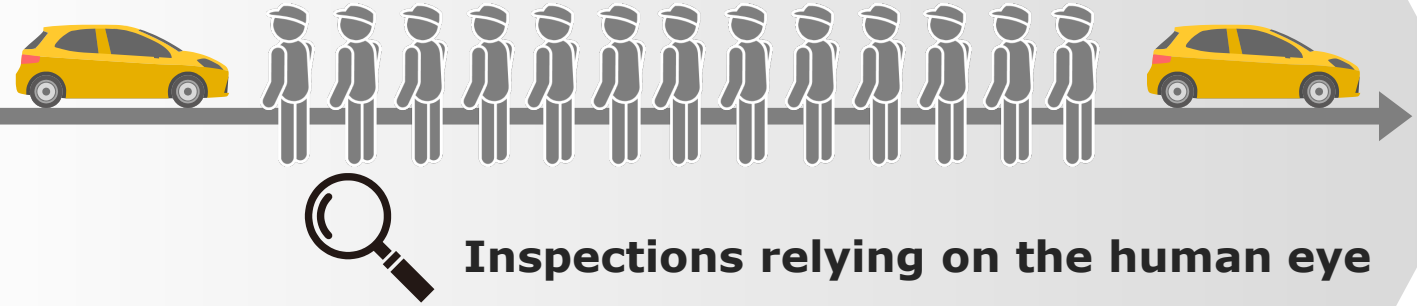
Automotive visual inspection involves a high degree of difficulty

- Many different car models, designs, and colors
- Large body sizes
- Microscopic defect detection
- Moving production lines

Difficult to automate and depends on human labor

Skilled workers required

Current inspection



Inspections relying on the human eye

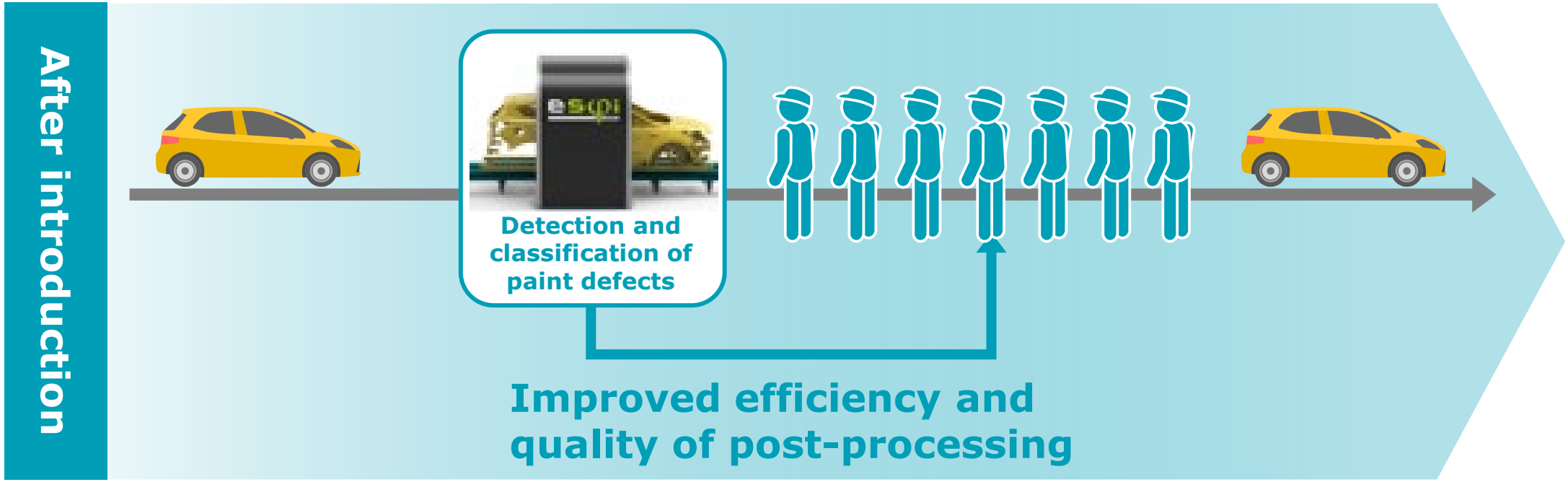
High demand for auto visual inspections over the years

Automotive Visual Inspection (Surface paint quality inspection): Provision of Values

By automating visual quality inspection on the production line

- **Labor saving**
- **Human error reduction**
- **Skilled workers not required (no training needed)**

Reduced work hours by two-thirds (past case study)



[Video] Surface Paint Quality Inspection System

Video projected only at the venue

Automotive Visual Inspection Business:
Toward the Market Expansion Period

The market enters a period of expansion following a rebound in auto companies' investment, which had been curbed due to the COVID-19 pandemic.

Leveraging the Group's sales networks and customer assets, we will expand our businesses from Europe to China, Japan, Asia, and North America.

Automotive visual inspection market (2025)

Market scale: ¥15 bn CAGR: 15% or more

*Estimated by Konica Minolta

Enhancement of Added Value through Technological Synergies

Enhance Eines' strength in products by leveraging our optical and imaging-AI technologies
Deepen cooperation with customers and continue to evolve further

eines VISION SYSTEMS
+
KONICA MINOLTA

Optical technology
Imaging-AI technology

Strengthen solutions

Improve inspection precision
Improve detectability

Improve efficiency of AI-based defect classification
Achieve high-precision classification performance

Shorten installation time
Ensure improvement of over 20%

+

Work with customers/ partners

Use DX to enhance added value

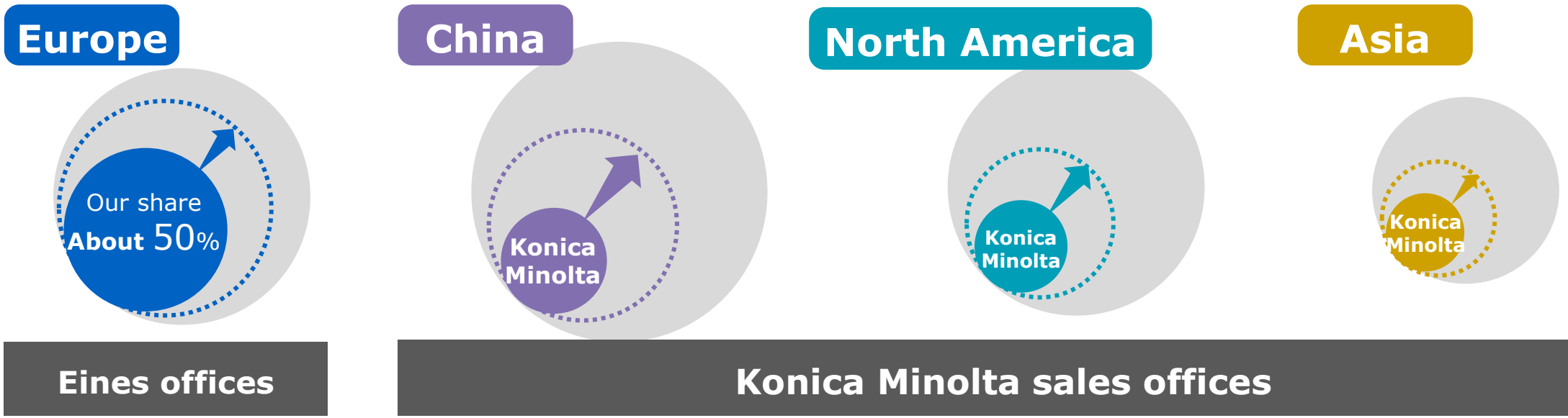
Auto defect repair
Collaboration using defect classification data

Improve processes with data analysis
Started discussions and considerations

Automotive Visual Inspection Business:
Market Share and Business Opportunities

- Acquired high market share in Europe, attracting inquiries from luxury car brands
- In China, cultivate new customers and deploy new solutions
- In North America and Asia, expand our market share through close contacts with our customers by leveraging our sales base.

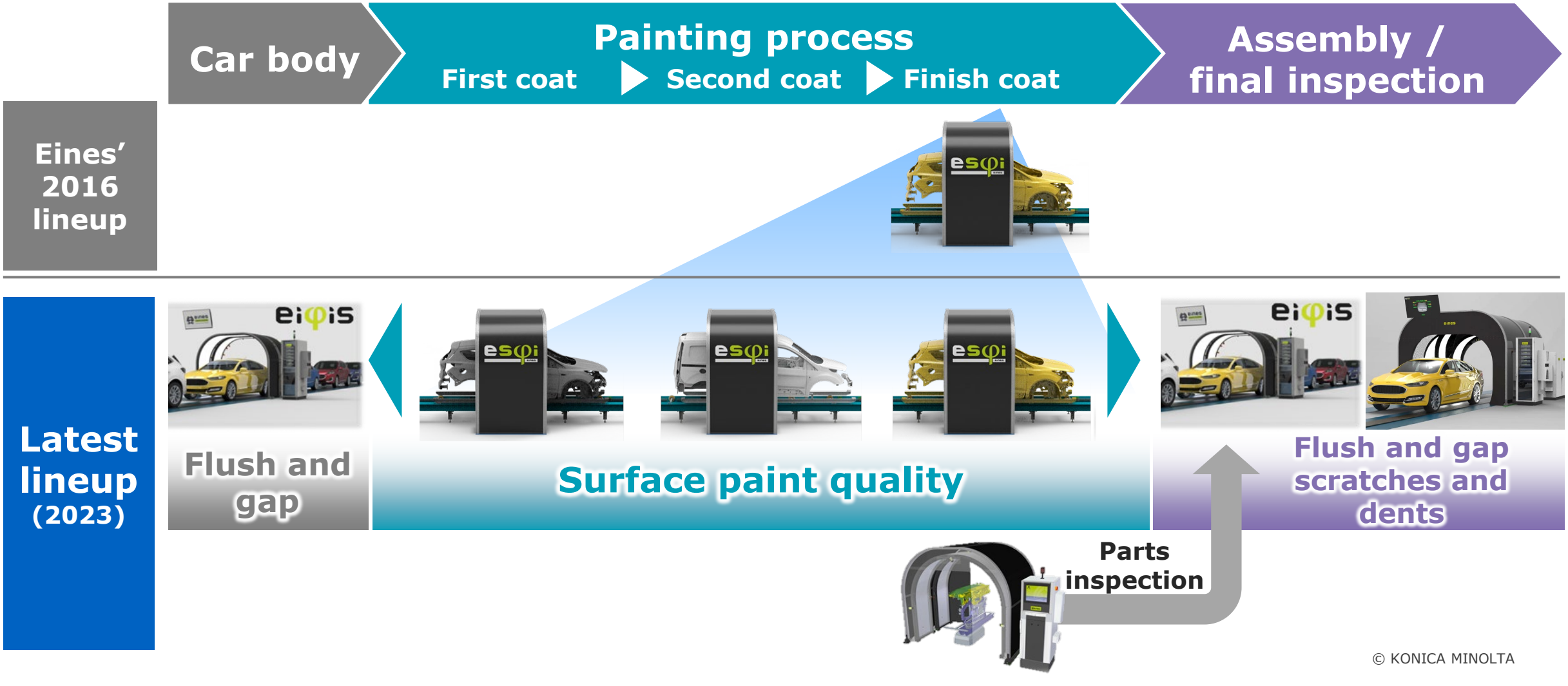
Image of the Tunnel-type solution's market share



● Current ◌ Medium-term target ● Whole market (estimated by Konica Minolta)

Automotive Visual Inspection Business:
Toward Further Growth (Tunnel-type solution)

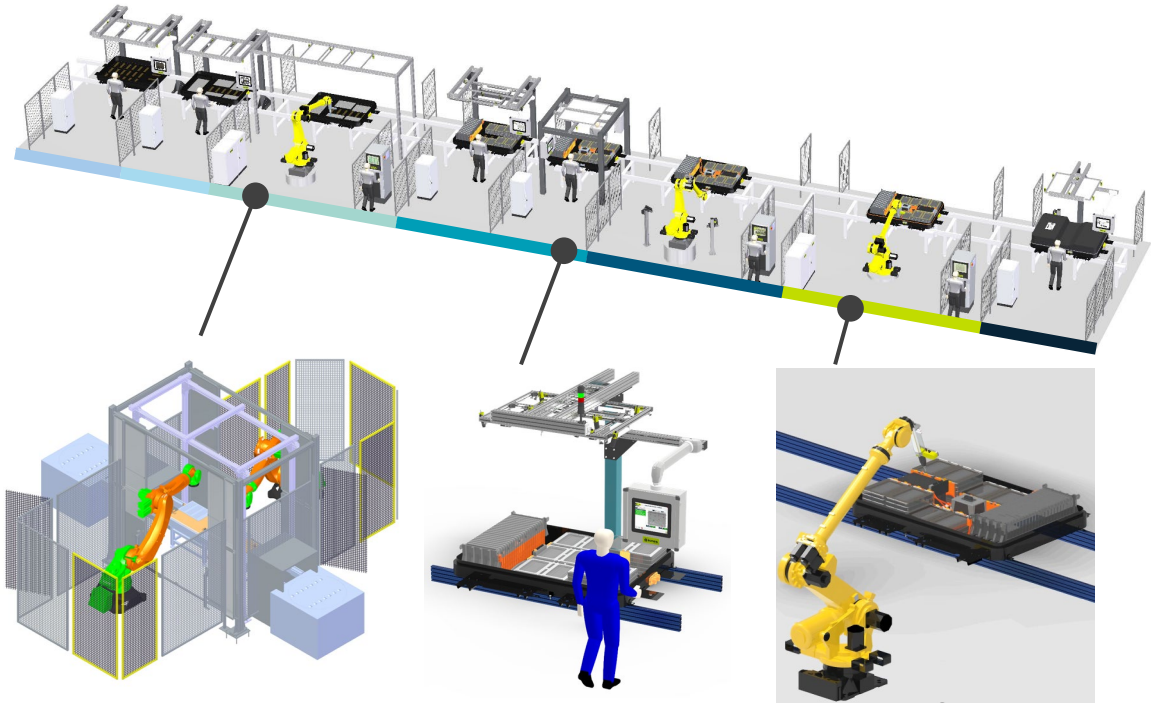
We adopt the tunnel-type solution, which was initially designed for a finish-coating process for car painting, to customer needs and deploy the solution in three ways: painting process, other processes, and parts.



Automotive Visual Inspection Business: Toward Further Growth (excluding the Tunnel-type solution)

Solutions for electric vehicles (EVs)

Provide optimal inspection solutions through close contacts with customers

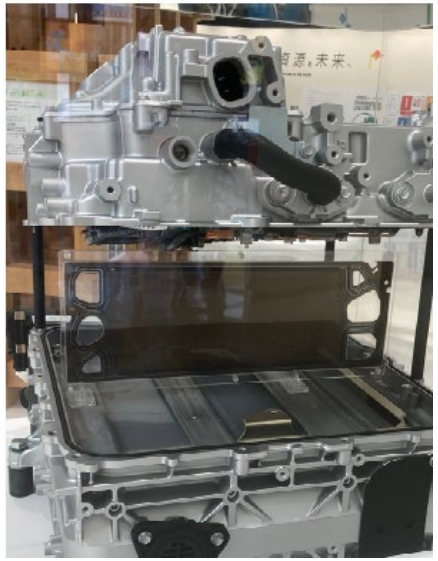


Battery cooling plate inspection → **Housing position measurement** → **Sealing aligned to the position**

EV = Electric vehicle

Solutions for fuel cell applications

Detect part defects with high sensitivity camera system



Separator

*Displayed in Toyota Kaikan Museum

RADIANT VISION SYSTEMS

+

Software / lighting

Radiant Vision Systems, LLC

Location: Redmond, Washington, U.S.A.

Business activities: Development and sales of measuring instruments for display products

Joined Konica Minolta Group in August 2015

Automotive Visual Inspection Business: Final Messages

- Eines makes automotive visual inspections more efficient through automation, which previously relied on the human eye, thereby creating and driving the visual inspection market.
- Although the market was affected by the COVID-19 pandemic, we expect the market to expand in the future from a focus on Europe and the U.S. to a global market, reflecting a recovery in investment by automotive companies.
- Konica Minolta and Eines will expand offered value for customers through technology and sales synergies and accelerate business expansion globally.


KONICA MINOLTA
150
YEARS

Appendix

Glossary of Terms

- **Light source color**
  The brightness and color of a light source that itself emits light such as lighting and displays.
- **Object color**
  The brightness and color of objects that themselves do not emit light such as auto parts and food products.
- **Appearance**
  An element in the object color field that indicates differences in appearance due to surface conditions other than color. Typical examples include the orange peel finish of car paints.
- **HSI**
  Hyper Spectral Imaging (HSI) is an imaging technique in which a wide range of wavelengths are divided into multi-wavelengths. This technique can be used to sort different types of plastics that cannot be identified by the human eye or an RGB camera.