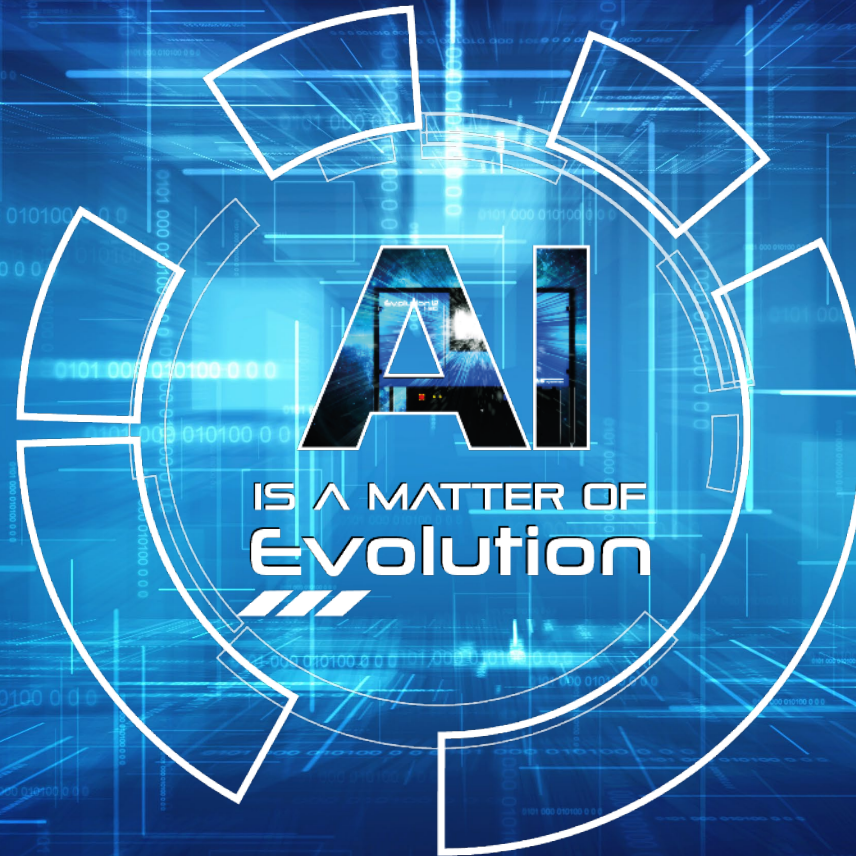


# How to make AI an Asset for Glass?



# AI transforms the concept of inspection





**AI**  
IS A MATTER OF  
**Evolution**

# Our 2 Strategic Pillars



**AI and  
Machine  
Learning**

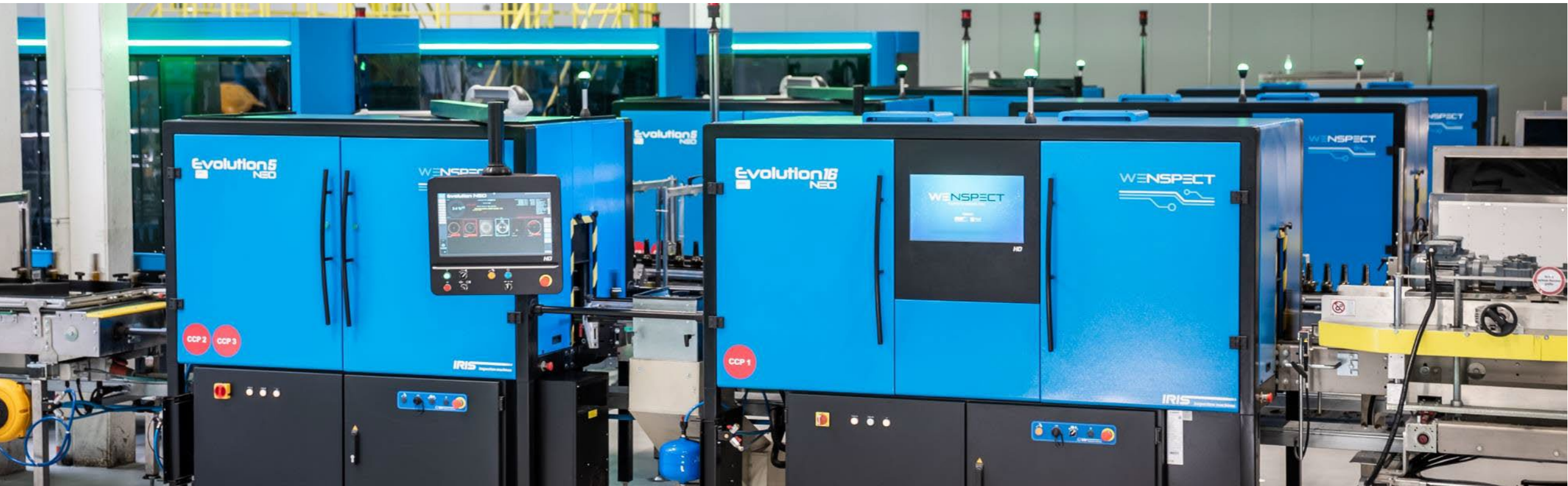
**Real  
Time  
Monitoring**

# What if your inspection machines...



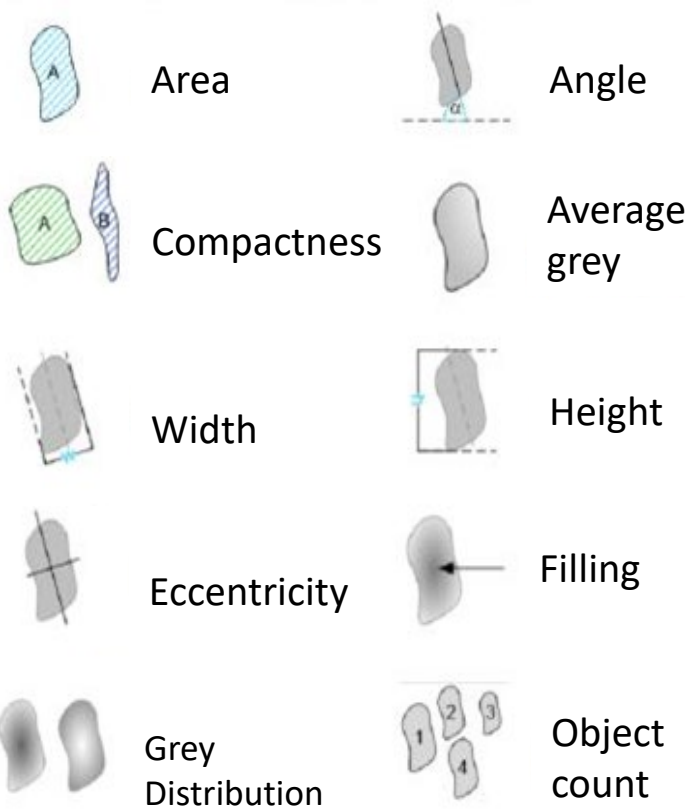
Could behave like  
your most experienced  
quality manager,  
24h/7?

# Intelligent machine as connected sensor



# 2018 : NEO Intelligence

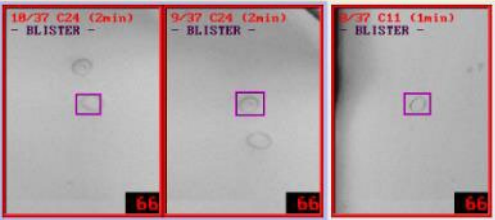
## Defects classification by machine



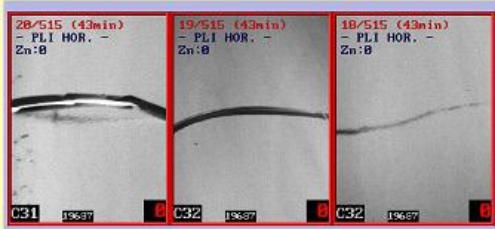
# 2018 : Evolution NEO

## Defects classification by machine

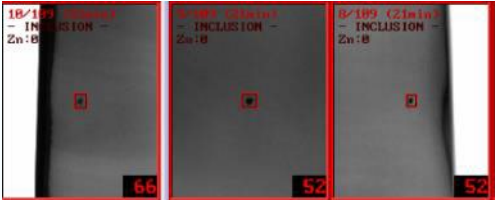
Blisters



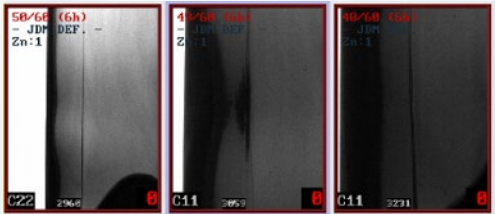
Horizontal defects



Stones



Vertical defects



Classification done by the NEO intelligence

NEO

# 2024 : NEO AI

2018  
NEO

# NEO AI

ALLOWS ACURATE & DETAILED ANALYSIS



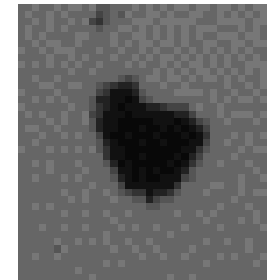
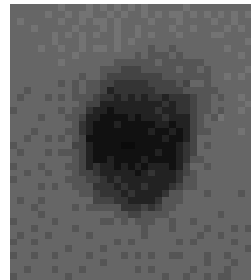
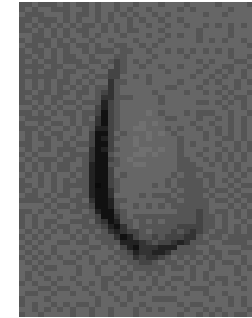
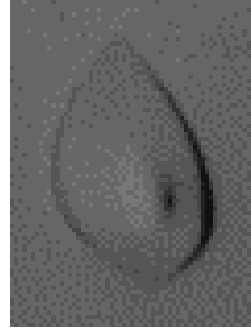
# How does AI in inspection work?

---

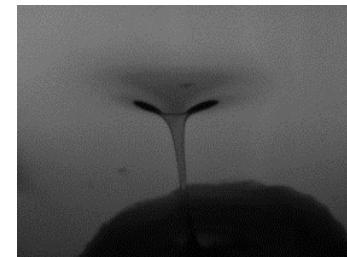
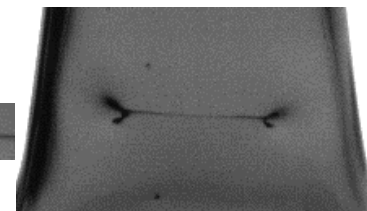
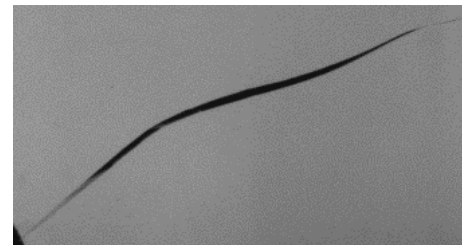
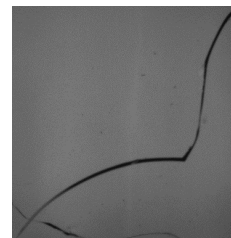
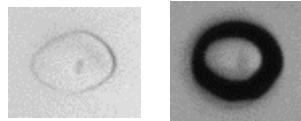
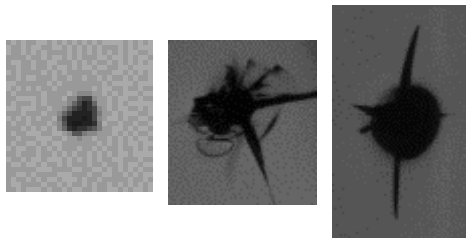
EVOLUTION NEO AI

# AI based machine

AI closely mimics expert human judgment



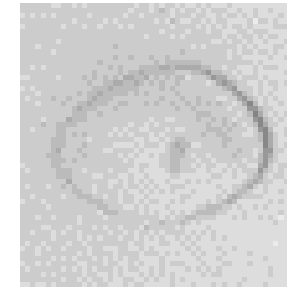
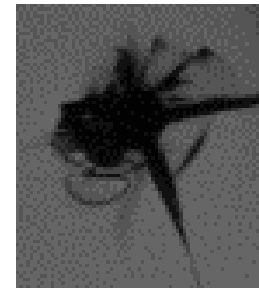
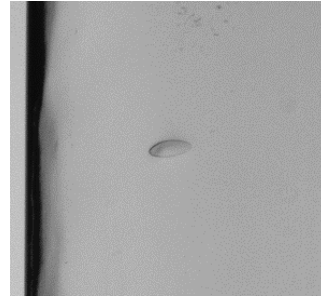
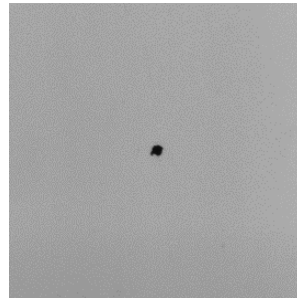
# NEO AI "speaks glass"



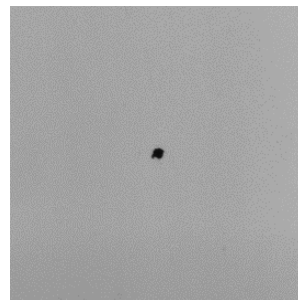
# Valueable information for your MES

Traditional approach

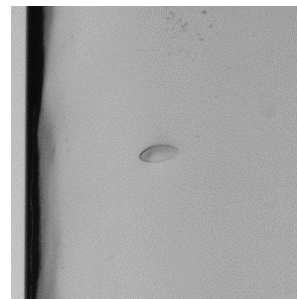
1,2%  
of compact defects



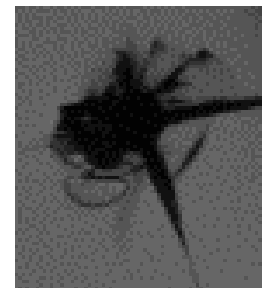
0,3%



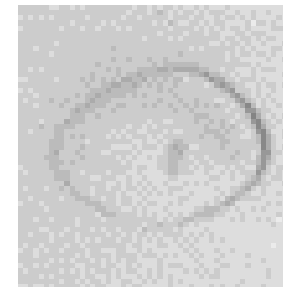
0,12%



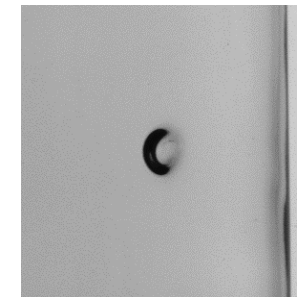
0,18%




0,45%



0,15%



# What if collective machine intelligence...



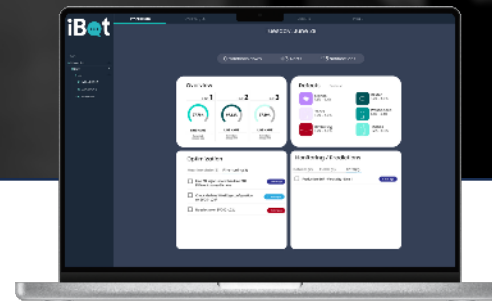
Could predict  
your future defects  
and help avoiding them?

PRODUCING  
SAFELY EFFICIENTLY  
QUICKLY  
SMARTLY

iBot

- ✓ To increase the pack-to-melt ratio
- ✓ To prevent defects, not just detect them

« Iris Boosts your Operator's Talents »

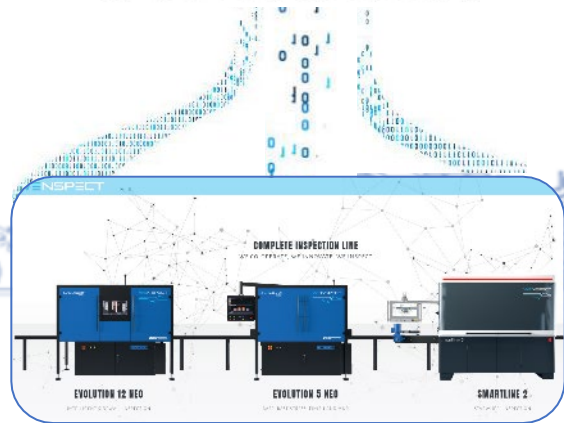




# Collective intelligence in action

# iBot

ai-based assistant



Hot End

Cold End

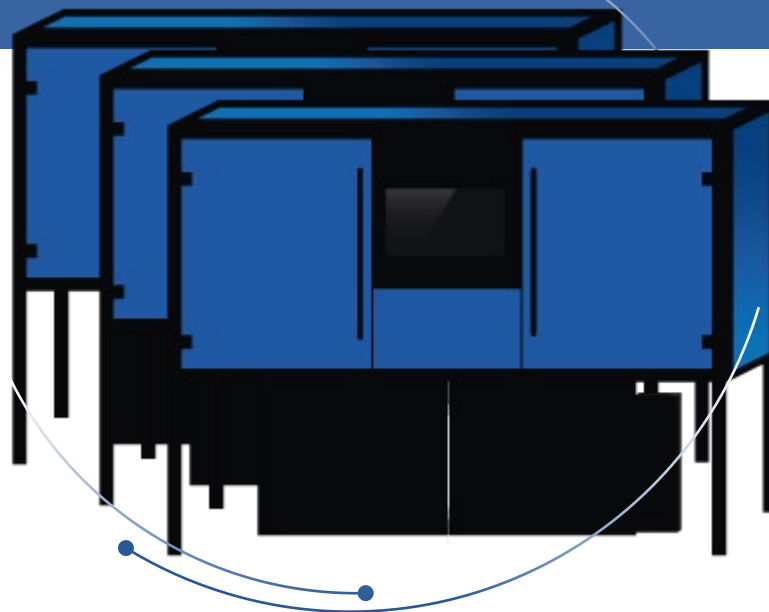
Quality Department



Analyse your  
production  
&  
Optimise the  
inspection

Monitor your  
past rejects  
&  
Secure the  
quality

Alerts to  
atypical  
behaviour of  
machine fleet



VERTICALITY VALUES

MES

ARTICLE SETTINGS

MACHINES SETTINGS

COUNTERS

IMAGES

MACHINE STATUS

BODY MEASUREMENT

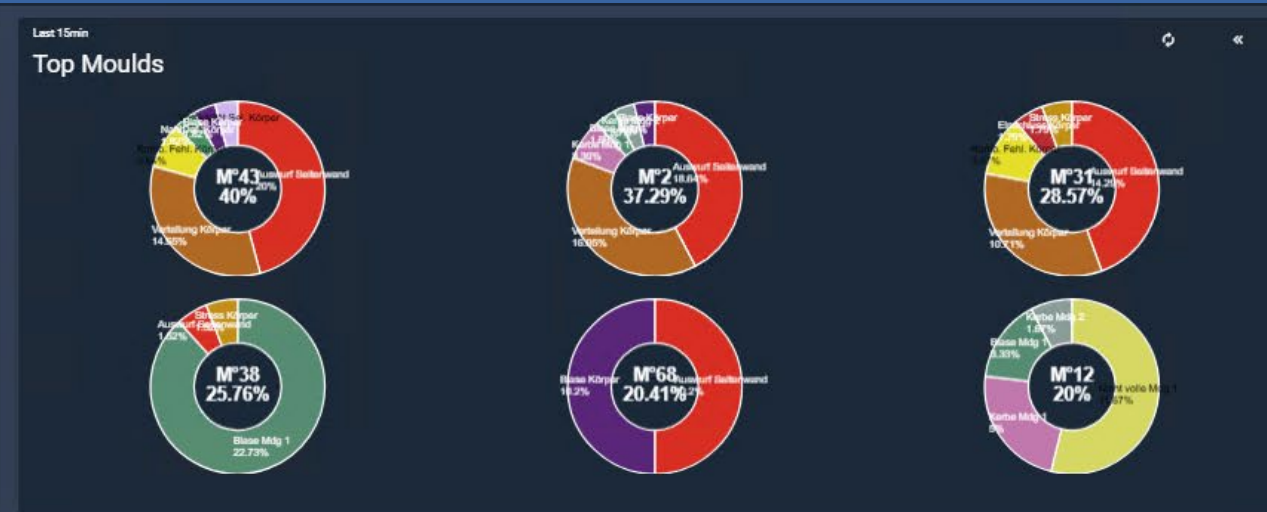
TOP DEFECTS

DEFECT CHARACTERISTICS

DEFECTS PER SECTION



## Identification of early defect signals



Defects Gallery

2025-04-07 23:45:00 - 23:59:59

- Blase Mdg 1 (3.52 mm)
- Blase Mdg 1 (4.905 mm)
- Komb. Fehl. Körper (100 µm)
- Komb. Fehl. Körper (88 µm)
- Komb. Fehl. Körper (88 µm)
- Komb. Fehl. Körper (1.14 mm)
- Komb. Fehl. Körper (1.52 mm)
- Schleife Mdg 1 (80 µm)



**iBot**  
ai-based assistant

WANNE 2

- IS Machine
  - 21
    - EV12\_L21
  - 22
    - EV5\_L22
    - EV12\_L22
  - 25
    - EV5\_L25
    - EV16\_L25
  - 26
    - EV16\_L26
    - EV5\_L26

WANNE 1

- IS Machine
  - 11
    - EV16\_L11
    - EV5\_L11
  - 12

v5.0

EV5L11-3 Mould N° 42 2025-05-07 06:15

3.03%



Reject rate

DETAILS

EV16L11-1 Mould N° 38 2025-05-07 06:00

0.77%



Reject rate

DETAILS

EV5L11-1 Mould N° 25 2025-05-07 05:15

0.91%



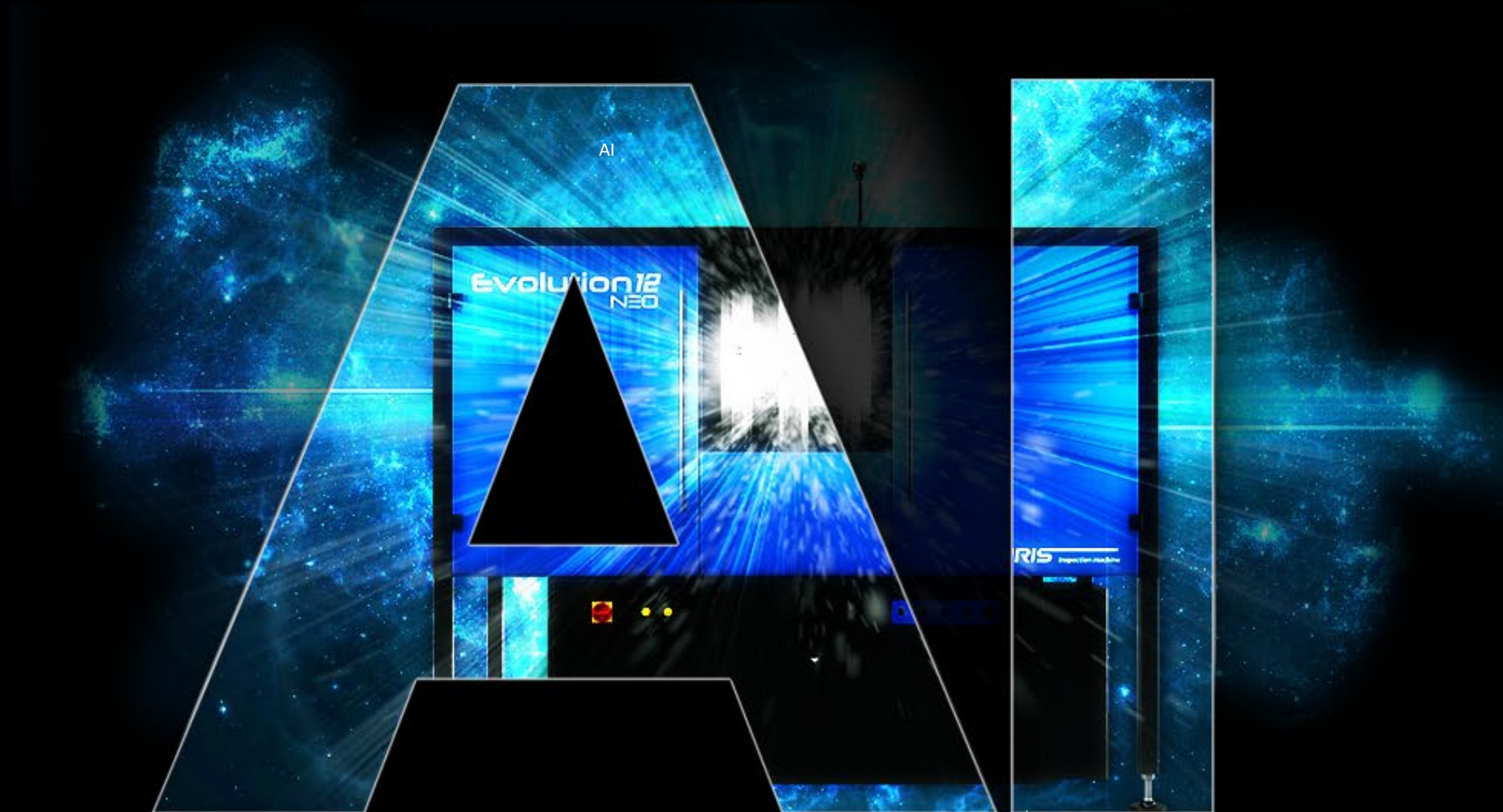
Reject rate

DETAILS

**ALERT!**

Be alerted  
before the defect  
impacts your PTM

This is **more than**  
an inspection machine



# Intelligent inspection at Ardagh Obernkirchen



NextGen  Furnace

**14** Evolution NEO  
+ iBot

**7** SmartLine 2

Beer production up to  
**350 BPM/leg**

# WEN SPECT

Together for complete lines

POWERED BY

**IRIS**<sup>™</sup>  
Inspection machines

**h** heye  
international



**Thank you**

Any questions ?