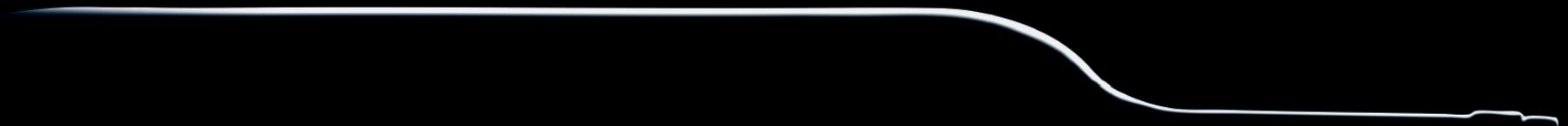


# Optimization in container inspection using Intelligent Software



# Nature of the challenge

- **Visual human control :**

Today considered as non reliable. Too expensive

- **Quality expectations and targets :**

What was yesterday acceptable is no longer accepted by customers

- **Article complexity :**

In constant increasing, whatever the considered market

**Spirits / Wine**

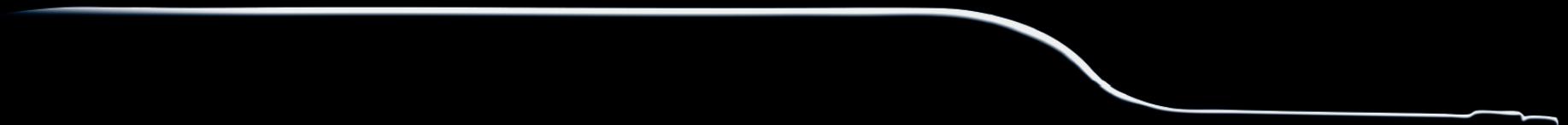


**Beer**



# Dedicated solutions

- **Non round engraved articles**
- **Round articles with logo**
- **Complex shapes with multiple engravings**



# Non round articles : Dynamic Masking



- **Problematic** : The engraving produces a complex optical signature where the inspection is impossible

**NOT ENOUGH**

- **Before**: A complex and time consuming inspection zone drawing



# Non round articles : Dynamic Masking

- Today dynamic masking principle :



As the production goes, the software learns the optical signature of the article.



# Non round articles : Dynamic Masking

- **Result** : Each pixel of the image will have its own detection sensitivity, calculated from the learning process.



Defect detection possible around and inside the engraved areas.

# Round articles with logo : Dynamic zones



- **Problematic** : At the logo height, orientation variation impacts possible sensitivity inside and outside the logo.

**NOT ENOUGH**



- **Before**: This area of the article is not inspected....

# Round articles with logo : Dynamic Zones

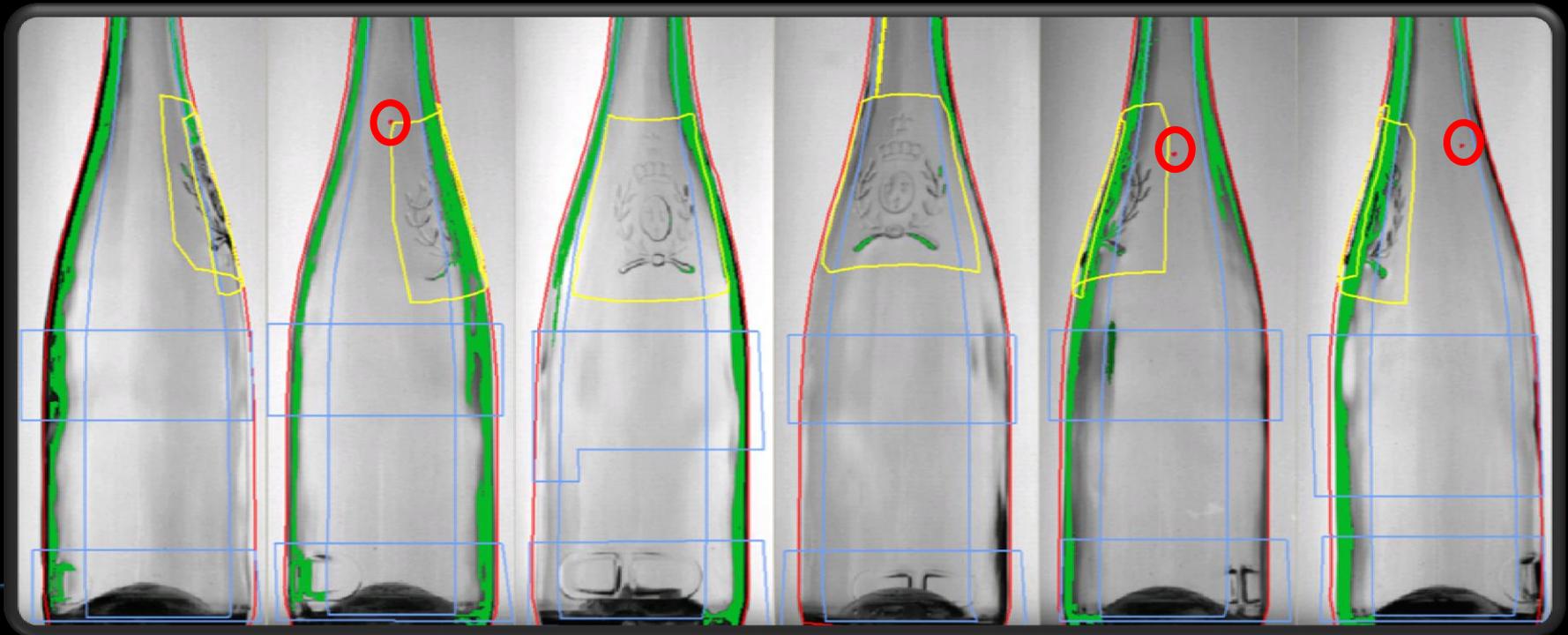
- **Principle** : An inspection zone follows the logo position depending on the article orientation



# Round articles with logo : Dynamic Zones

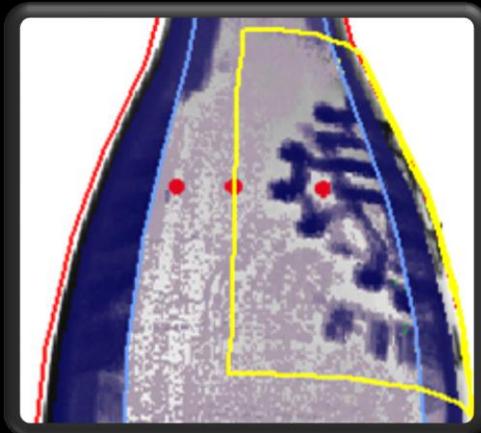
- **Result** : A very High sensitivity level is possible outside of the logo

## Detected Defect

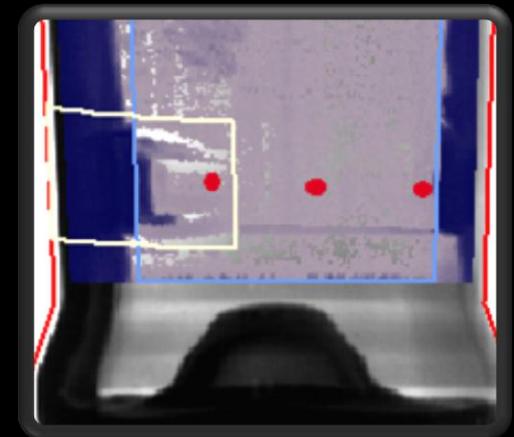


# Complex shapes with multiple engravings

- **KOMPASS** : Automatic online article orientation device



**Total Inspection  
around and inside  
the engraved parts**



Thank you for your attention

