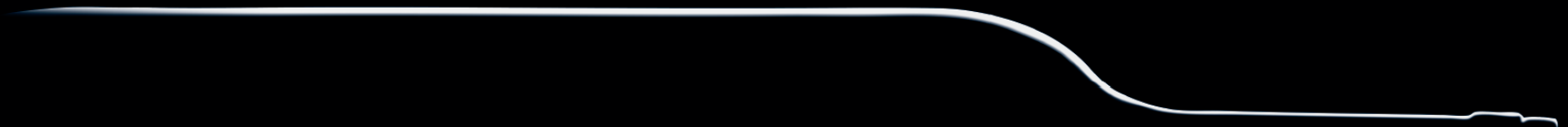


Optimization in container inspection using Intelligent Software



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

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

NOT ENOUGH



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

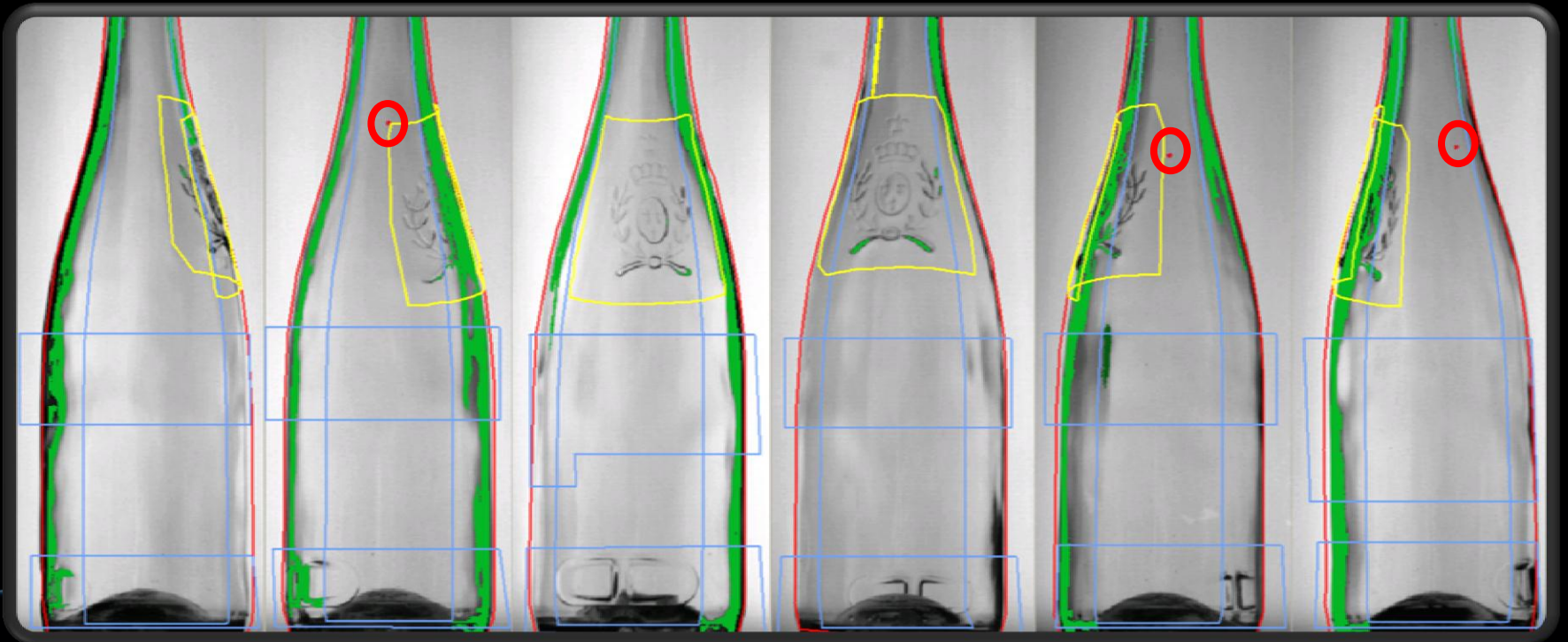
- **Principle** : An inspection zone follows the logo position depending on the article orientation



Round articles with logo : Dynamic Zones

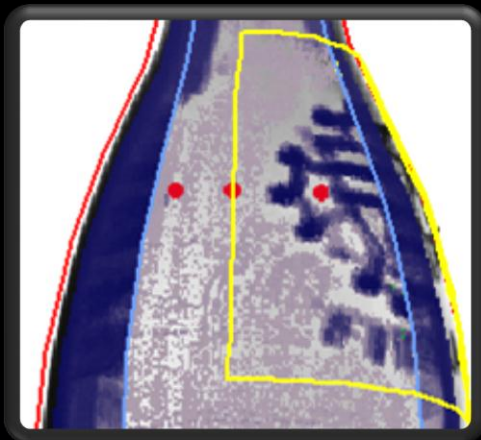
- **Result :** A very High sensitivity level is possible outside of the logo

Detected Defect

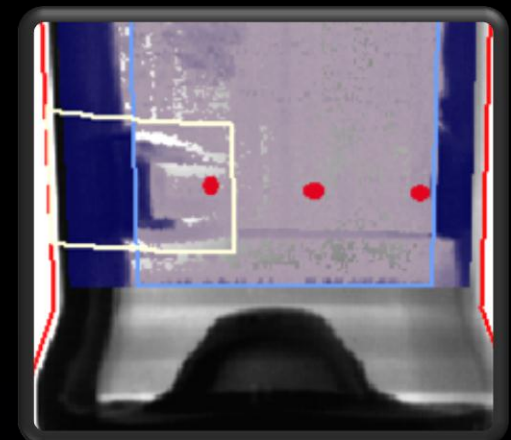


Complex shapes with multiple engravings

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



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



Thank you for your attention

