

How to move from classic industry to Industry 4.0

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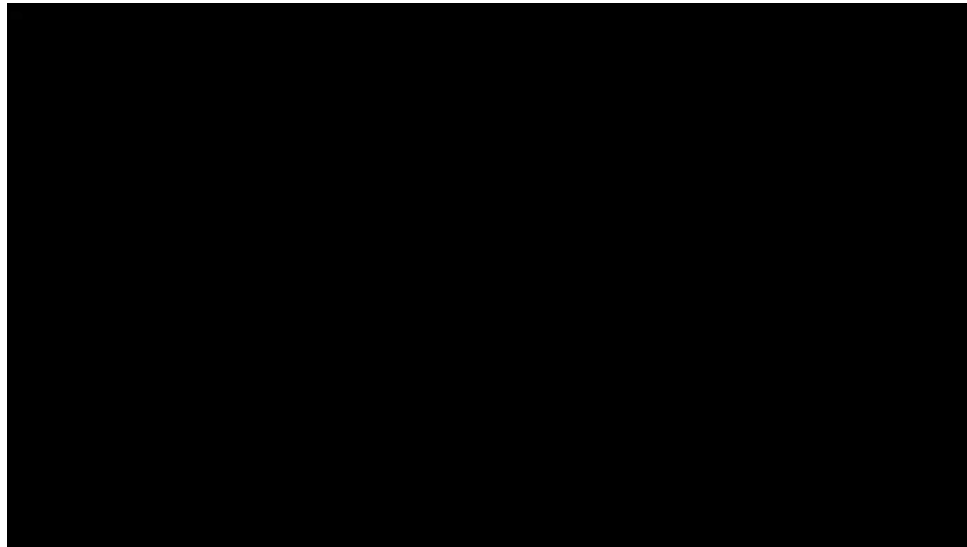
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1. Context

In 2011 request from Moerdijk's Ardagh Group plant in Netherland :

- Glass container industry is automatized for a long time for mass production.



1. Context

There remains an area where operation is full manual made by operators:

The **SWABBING** = lubrication of blanks molds



2. Swabbing-robot

because of :

- 1) Highest labour cost for operators.
- 2) Highest level of productivity

They wanted to remove the last manual operation, to anchor their facility in Netherland :

- 3) Remove manual swabbing
- 4) Increase productivity
- 5) Short pay-back

2. Swabbing-robot

So we create the Swabbing-robot :



2. Swabbing-robot

Welcome to the

FACTORY OF THE FUTURE



**A FACTORY
CAPABLE OF
PRODUCING
QUICKLY...**

Flexibility

...a very wide
variety of products

Agility

...customized, to the
customer's requirements

Efficiency

...at a cost equivalent
to mass production

AGORIA

MADE DIFFERENT
BUILT BY THE FUTURE

sirris
Innovative solutions

2. Swabbing-robot

The swabbing-robot: key to enter Industry 4.0

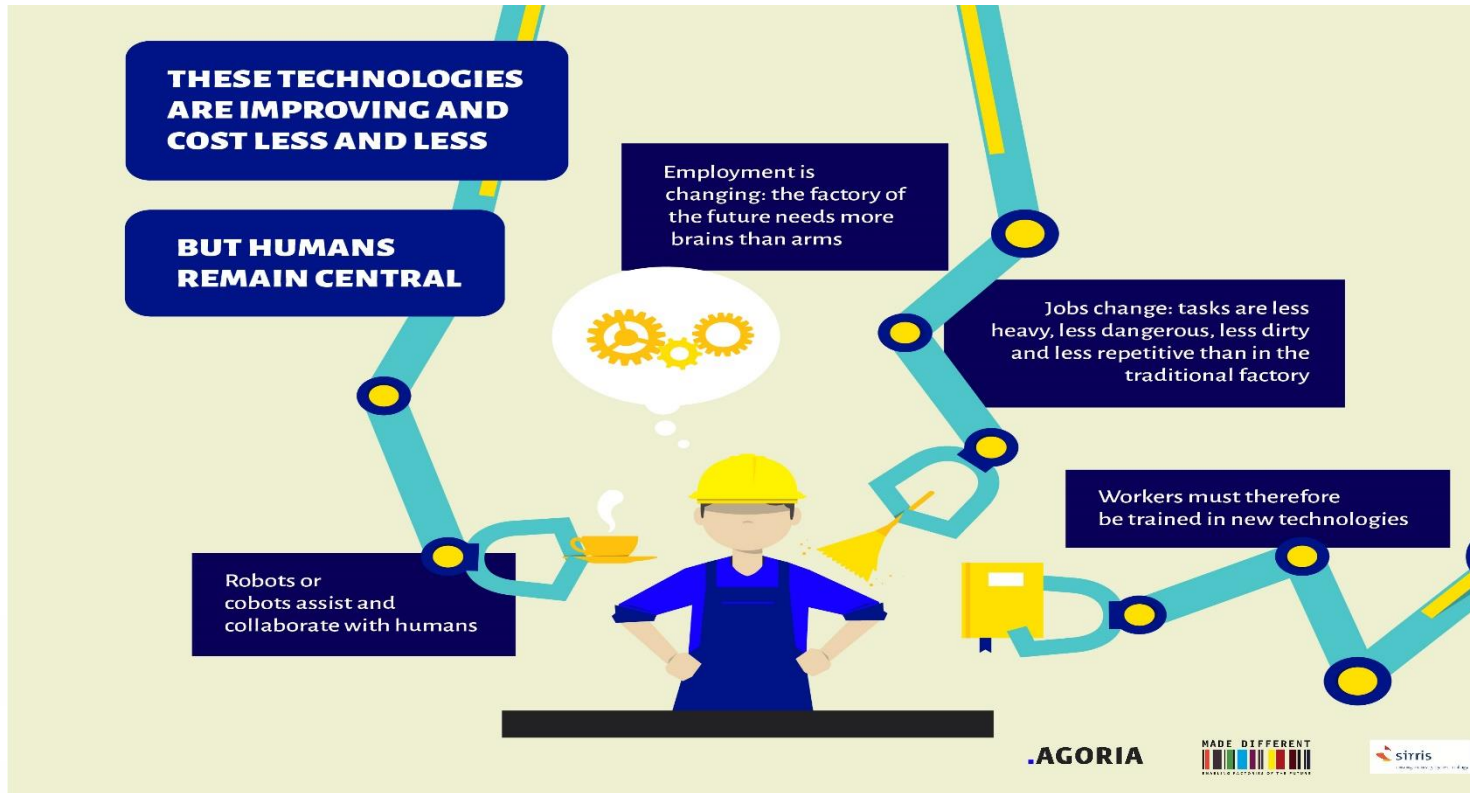
- 1) Flexibility: different model of bottles are produced simultaneously
- 2) Efficiency: control of quantity of oil sprayed and reproductivity
- 3) Agility: to be adapted easily for new models of products
- 4) New devices added to collect information about production parameters
- 5) Connected to the world.

2. Swabbing-robot

The swabbing-robot: the future

- 1) Recording parameters about product.
- 2) Exchanging those parameters to the cloud
- 3) Extractions of trends product oriented
- 4) Feedback to plant to improve productivity
- 5) Helping plants to start new products collecting standards parameters from cloud

2. Swabbing-robot



3. Conclusions



- 1) Ardagh Moerdijk's plant is full equipped by our robots
- 2) 95% of manual swabbing has been removed
- 3) They increase productivity : 2%
- 4) pay-back: less than one year
- 5) 12 robots already sold in the world in 18 months

3. Conclusions

Thank you for your attention