

*IndustriALL Steering Committee Meeting
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Manufacturing 4.0: the last disruptive approach!



European status
&
the possible European
Trade Union actions

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Living in a
connected world:



the birth of
Manuf 4.0

The promise of the future plant according to Manufacturing 4.0

- The future plant will be *more agile, flexible*
- It will *cost less*
- It will *respect more the workers*
- It will also, *respect* more the *environmental issues*

Thanks to a high level of **automation**, and the **digital integration** of the **entire production chain**

**Do we,
as a Trade Union,
believe in this
promise?**

Back to the genesis of industrial age

In each of the first three industrial revolutions, employment has evolved:

- New jobs have been created
- Others have disappeared...

Thus, what's about the fourth?

1st industrial

revolution (~ 1790)

Introduction of the steam machine in production area



2nd industrial

revolution (~ 1870)

Introduction of the electricity in production area & mass production



3rd industrial

revolution (~ 1960)

Introduction of the microprocessors and computers leading to first robots



4th industrial

revolution (nowadays)

Digitalization of the production area with IoT, 3D printing, Virtual or Augmented Reality, Big Data, Cobots



Manufacturing 4.0: what is it about?

- New high technologies are developing faster than ever
 - Bigger storage capacity than ever with the cloud
 - Ability to analyze and model data, at a high scale through « Big Data »
 - Increased coverage of telecommunication networks
 - New technologies have appeared
 - 3D printing
 - Virtual or augmented reality
 - Intelligent robot or collaborative robot
 - IoT



Manufacturing 4.0: what is it about?

- The new high technologies in the production area lead to new ways of producing goods
 - They increase the production flexibility
 - They may reduce the production costs
 - They enhance the quality of produced goods
 - They allow predictive maintenance
 - They may replace repetitive or painful tasks...



Manufacturing 4.0 in Europe

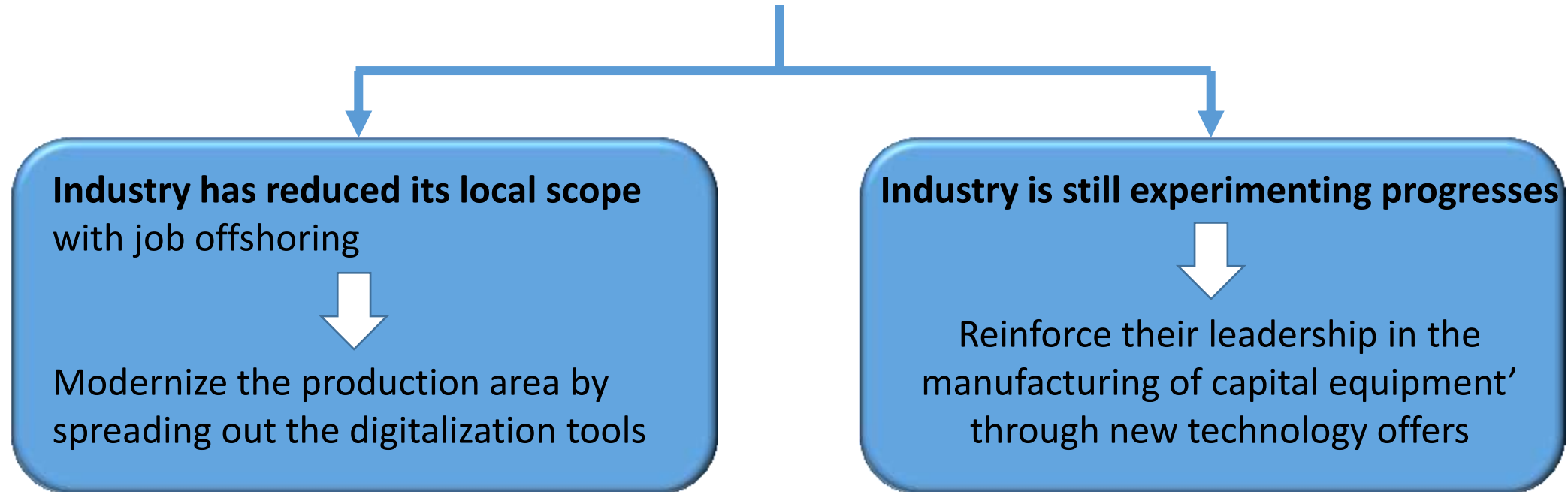
- Europe has to manage at the same time its ecological and energy transitions



- Manufacturing 4.0 may facilitate all these transitions
 - It promises plants to be: innovative, competitive, performant, clean, non polluting, low energy consumption

Manufacturing 4.0 in Europe

- There are various strategies in Europe depending on the situation of the industry in each country



- Every country is preparing the future of its industry with Manufacturing 4.0

What are the stakes for Europe with Manufacturing 4.0?

- Reinforce the competitive advantage of European industry
- Recover after years of industrial decline
- Stop the deindustrialization
- Reshore to Europe some jobs that have been relocated in low cost areas



What's behind the scene?



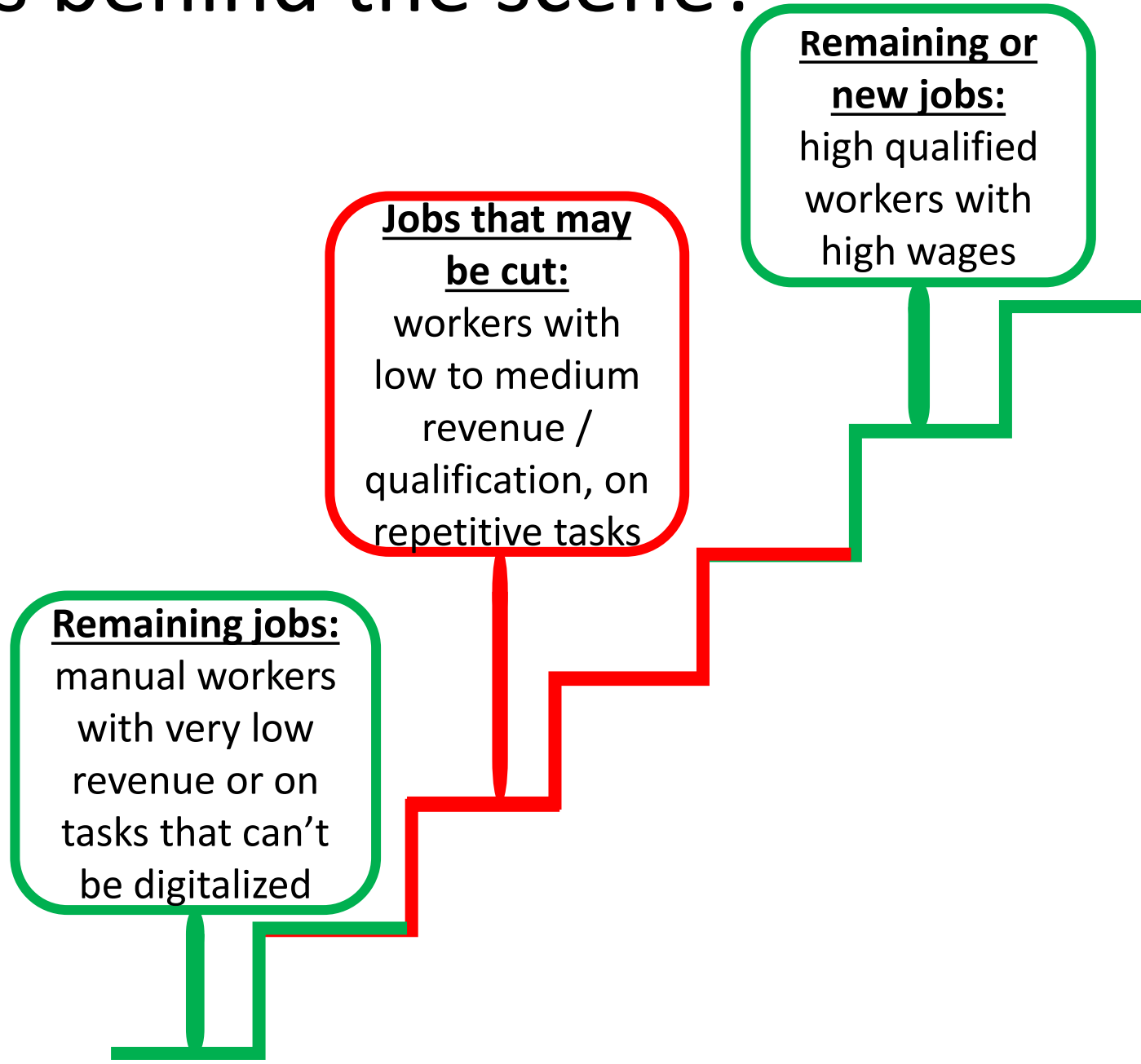
- The technology will modify in the years to come the jobs of million of workers (possibly ~54% of the jobs)
- The main threat is of a future with **less and less jobs** and fantastic **productivity increase** in the industry
- Capital investment in automation will replace some of the human works, leading to
 - A reduction of traditional production jobs if the production volume remains at the same level
 - An increase of traditional jobs if the production volume raises due to an increase of competitiveness
- What's about job creation?

What's behind the scene?



- Job massive destruction?
- Job move?
- Job replacement?
- Job creation?

What's behind the scene?



What's behind the scene?

What will be the new ways of managing people?

- *Risk*: extensive control

Jobs that may be cut:
workers with low to medium revenue / qualification, on repetitive tasks

Remaining jobs:
manual workers with very low revenue or on tasks that can't be digitalized

Remaining or new jobs:
high qualified workers with high wages

What will be the future work contract?

- *Risks* that jobs move from full time and permanent working contract to more precarious types of work (freelancers,...)

But where the new qualified jobs will be created?

- *Locally*: installation, operation and maintenance of the robots
- *Locally or elsewhere?* robot design and manufacturing, software for robots,

Main focus for European Trade Unions

- LOBBY & NEGOCIATE at different levels from political authorities to companies



- **And still fight for workers rights worldwide**

ありがとう
Thank you!

