

# **:YML**


## **YOUNG MANUFACTURING LEADERS**

### **Guidelines for Application Essay Contest for 2020 WM REPORT**

# Submit your essay to be featured in the 2020 World Manufacturing Report!

The **WM Report** is a high-level white paper published annually by the **World Manufacturing Foundation** and presented during the WM Forum. The 2020 Report will outline global trends in industrial **Artificial Intelligence** (AI), applications of AI in manufacturing, repercussions of AI for human capital, and the ethical, policy and legal perspectives of AI. Over **40 experts from 30 countries** are expected to collaborate on developing the Report.

The **Young Manufacturing Leaders** are invited to contribute to the Report by submitting essays.



**Winners will also be invited to the WM Forum and YML Main Event**

# Winners will be invited to the WM Forum\*

The **2020 World Manufacturing Forum** will take place on the **11th and 12th of November** in Cernobbio (Lake Como) Italy. It will focus on how the disruptive and yet enabling technologies of Artificial Intelligence (AI) are supporting **digital transformation in manufacturing**. Participants in the Forum will interact with **AI leaders** from Technology, Policy Maker, Management, Engineering, and Academic communities. The event will also be an opportunity for an open discussion on the challenges and state change brought on by **AI innovations and implications** in business and daily lives. **YML Main Event** will take place alongside the WM Forum.

\*In case of restrictions related to the current Covid-19 pandemic, the format of WM Forum and YML Main Event will be re-organized accordingly.



# Winners will participate in the YML Main Event\*

The **Young Manufacturing Leaders Main Event** will take place on the side-lines of the WM Forum bringing together representatives from various **YML City-Hubs** in Europe. The YML Main Event will be a chance to meet fellow YM Leaders from other countries and to discuss the various opportunities in the manufacturing sector and the skills needed by the future manufacturing workforce.

\*In case of restrictions related to the current Covid-19 pandemic, the format of WM Forum and YML Main Event will be re-organized accordingly.

# Essay Contest Guidelines

## Who can join?

The contest is open to **YML members**. Please check [this link](#) to register to the YML network.

There are **no nationality requirements**. However applicants should be residing in one of the countries identified in the next page **at least until the end of November 2020**.

## Rules

The subject matter includes **five topics** on AI with an orientation towards manufacturing.

A topic is assigned for each City Hub. Participants must choose the correct topic based on their **place of residence**.



For example, an exchange student from Egypt who is residing in Albania by 30th November 2020 can join the contest choosing the topic assigned to Milan City-Hub (see the chart in the next page).



On the other hand, an exchange student currently residing in one of the countries identified in the next page cannot qualify for the contest if (s)he goes back to her/his home country before November 2020.



## CITY HUBS

**Braunschweig**

**Bilbao**

**Milan**

**Gothenburg**

**Prague**



## COUNTRIES COVERED

Germany  
The Netherlands  
Belgium  
Poland  
Ireland  
Luxembourg

France  
Portugal  
Spain

Italy  
Switzerland  
Serbia  
Bosnia-Herzegovina  
Albania  
Montenegro  
North Macedonia  
Turkey  
Malta  
Faroe Islands

Finland  
Sweden  
Estonia  
Lithuania  
Norway  
Denmark  
Latvia  
UK

Slovakia  
Austria  
Czech Republic  
Greece  
Bulgaria  
Croatia  
Hungary  
Slovenia  
Romania  
Cyprus  
Georgia  
Armenia  
Ukraine  
Moldova



## TOPIC ASSIGNED

How can AI be used to improve environmental sustainability of manufacturing?

How can AI improve the customer experience?

Can workers and AI co-exist?

The ethical questions surrounding AI in manufacturing: What needs to be done?

How does AI support innovation and knowledge creation in manufacturing?



## PILLARS ADDRESSED (EIT-M)

Waste-Free Manufacturing for a Circular Economy

Additive Manufacturing for Full Flexibility

Platforms for Digitalized

Value Networks  
People and robots for sustainable work

People and robots for sustainable work

Waste-Free Manufacturing for a Circular Economy

All

# Definition of Artificial Intelligence

For purposes of this contest, we adopt the definition of AI proposed within the European Commission's Communication on AI.

*“Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals.*

*AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications)”\*.*



\* Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on Artificial Intelligence for Europe, Brussels, 25.4.2018 COM(2018) 237 final.

# Description of the topics

## How can AI be used to improve environmental sustainability of manufacturing?

Artificial intelligence has the potential to contribute to solve major environmental issues such as climate change. In manufacturing, AI techniques can help reduce the waste and pollution generated by production processes, helping lessen its negative consequences to the environment.

## How can AI improve the customer experience?

Thanks to AI, companies can provide more customisation options to customers. Data can be leveraged by companies to understand customer preferences and habits delivering solutions that cater to their needs.

## Can workers and AI co-exist?

AI can have profound impacts on human capital in terms of job creation & loss, changing job requirements and skill sets. Going on to the future, preserving the harmony between AI and humans will be more important than ever.

## The ethical questions surrounding AI in manufacturing: What needs to be done?

The ethical considerations are profound ranging from human agency, responsible use of data and transparency and accuracy of AI systems. Actions need to be done to address these ethical issues to enhance AI's positive contribution to the society.


## How does AI support innovation and knowledge creation in manufacturing?

AI is driving efficiency in production processes but more importantly, the wealth of knowledge created thanks to AI has the potential to support companies in creating new business models and generating new value streams.





# YML Essay Contest Rules



The essay consists of approximately **1200-1500** words, **written in English**, and using the **YML template**. It can be written by a single YML member or together with another fellow member.

The essay should reference to a specific **real case or examples** of applications in manufacturing.

The call is open **from 15/05/20 to 10/09/20**. The essay must be submitted through the [YML webpage](#) using the [contest template](#).

The essays will be evaluated by members of the **World Manufacturing Foundation Editorial Team**.



# YML Essay Contest Evaluation Criteria



## Creativity: 50%

- Originality / ingenuity of ideas
- Ability to identify case studies or applications that support the argument
- “Wow” factor

## Topic Understanding: 30%

- Responses adhere to the main topic
- Ideas presented demonstrate a critical analysis and thorough understanding of the topic

## Over-all Structure and Style: 20%

- Concise and direct to the point
- Free from grammatical errors



# Awards

- There will be **one winning essay for each topic**. Winning essays will be published in **2020 WM Report**.
- Winners will also be invited to the **World Manufacturing Forum 2020** and the **YML Main Event - 11th and 12th November, in Cernobbio, Italy**. The **costs of participation** (travel, accommodation, and food) are covered by the World Manufacturing Foundation. In case of a winning essay with two authors, only one will be invited to the Forum/YML Main Event decided by the contributors.
- During World Manufacturing Forum, winners will participate in a dedicated **official awarding ceremony**.

In case of any travel restriction related to the current Covid-19 pandemic, winners will be informed in due course.



# Young Manufacturing Leaders

For more information and questions contact:

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# YML



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