

# Influence of 3D Printing to the Future of Customs

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# Contents

**3D printing**

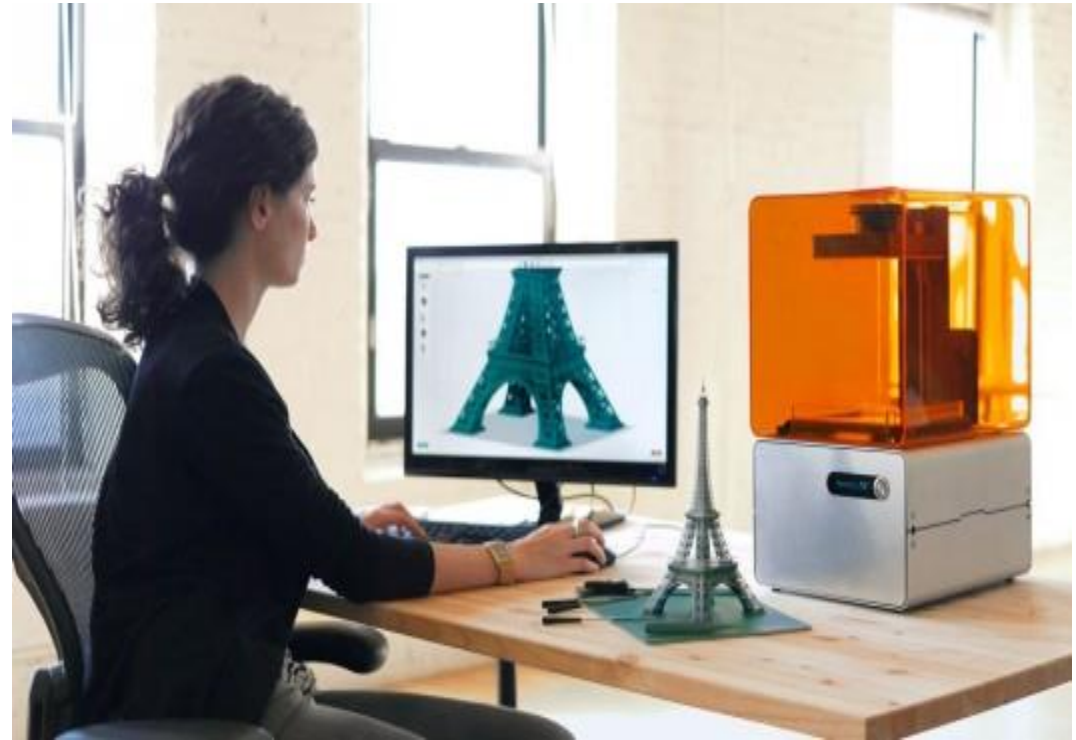
**Industry 4.0**

**Impacts of 3D to Customs**

**Possible solutions**

# 3D Printing

- ▶ A process of making three dimensional solid objects from a digital file, using a 3D printing machine with the raw materials.



# Advantages of 3D Printing



New structures  
and shapes



New  
combinations  
of materials



Less waste

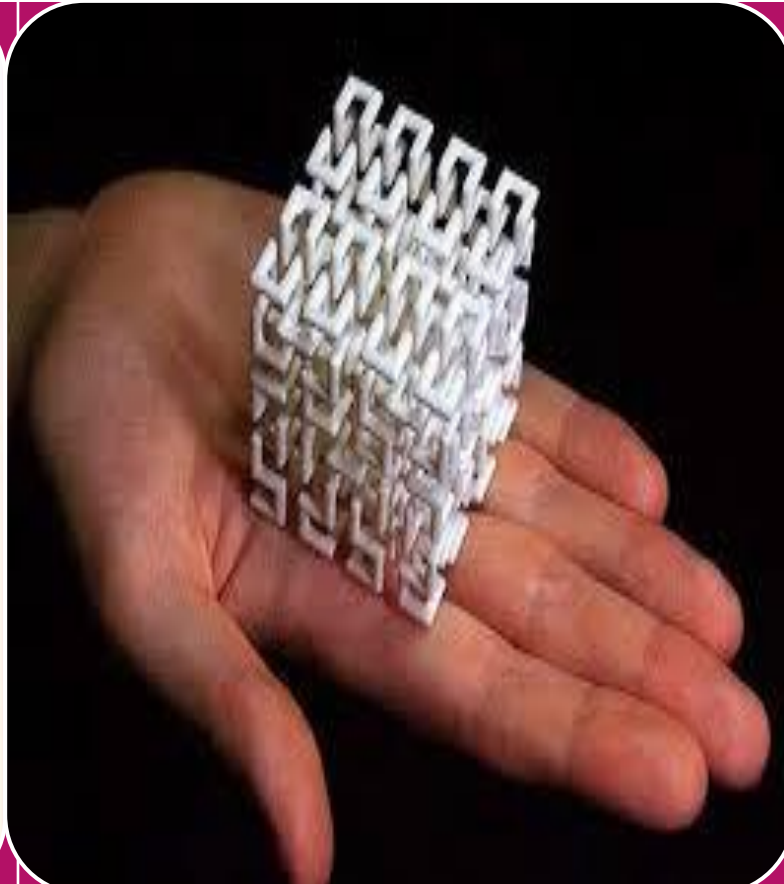
# Advantages of 3D Printing



Cheap manufacturing

Quick production

# 3 Generations of 3D Printing



# Application of 3D Printing

## Industry manufacturing



# Application of 3D Printing

## Construction





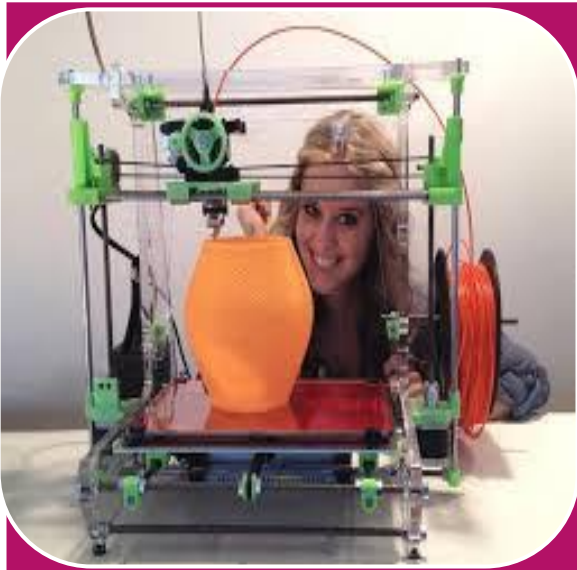
# Application of 3D Printing

## Bio medical

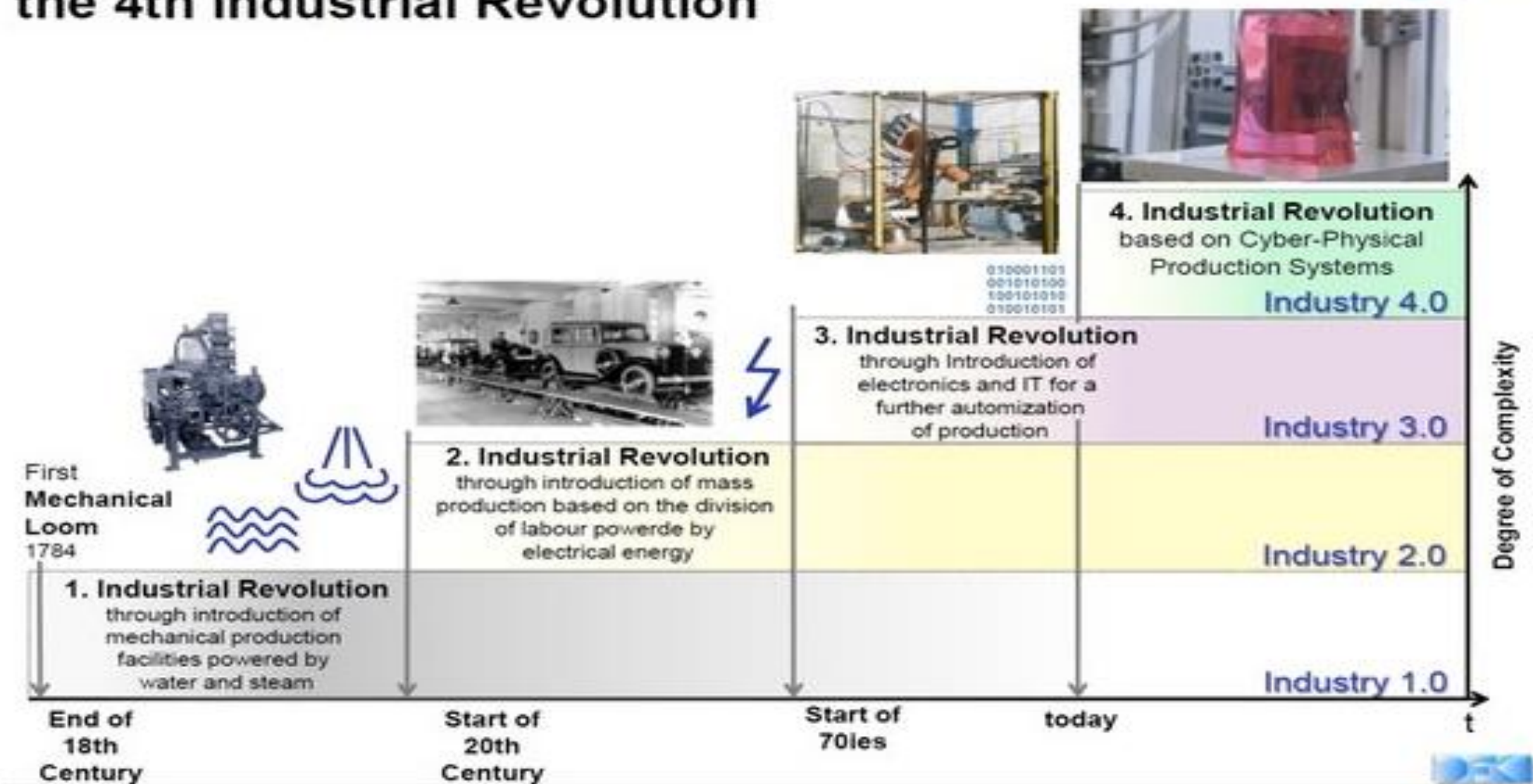


# Application of 3D Printing

## Ordinary users



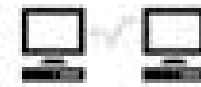
# From Industry 1.0 to Industry 4.0: Towards the 4th Industrial Revolution



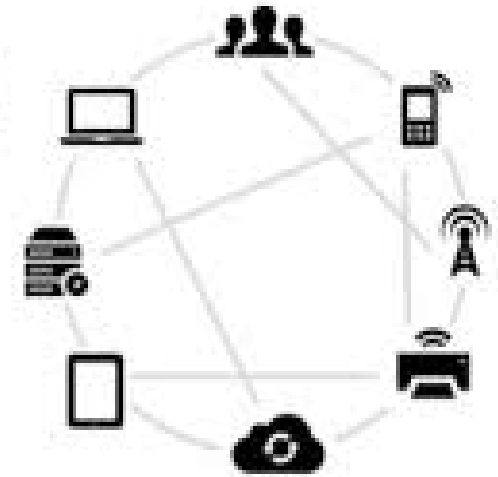
# Industry 4.0

**Transition of basic model from a centralized control to a decentralized, highly flexible, personalized and digital smart production mode of production and services.**

Industry 4.0



YESTERDAY



TOMORROW

## EXHIBIT 1 | Nine Technologies Are Transforming Industrial Production



# Characteristics of 3D Printing

Production  
change

- End user can also be the manufacturer.

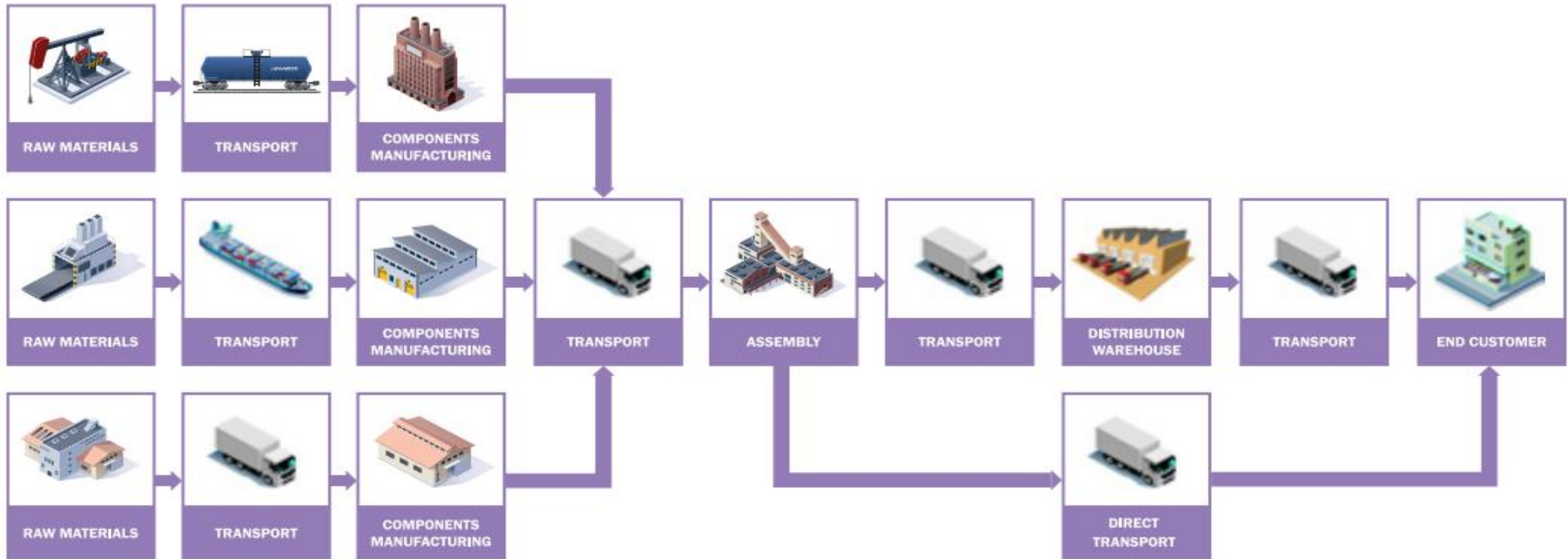
Supply Chain  
shorten

- Supply chain dramatically changed and shortened

New demand  
creation

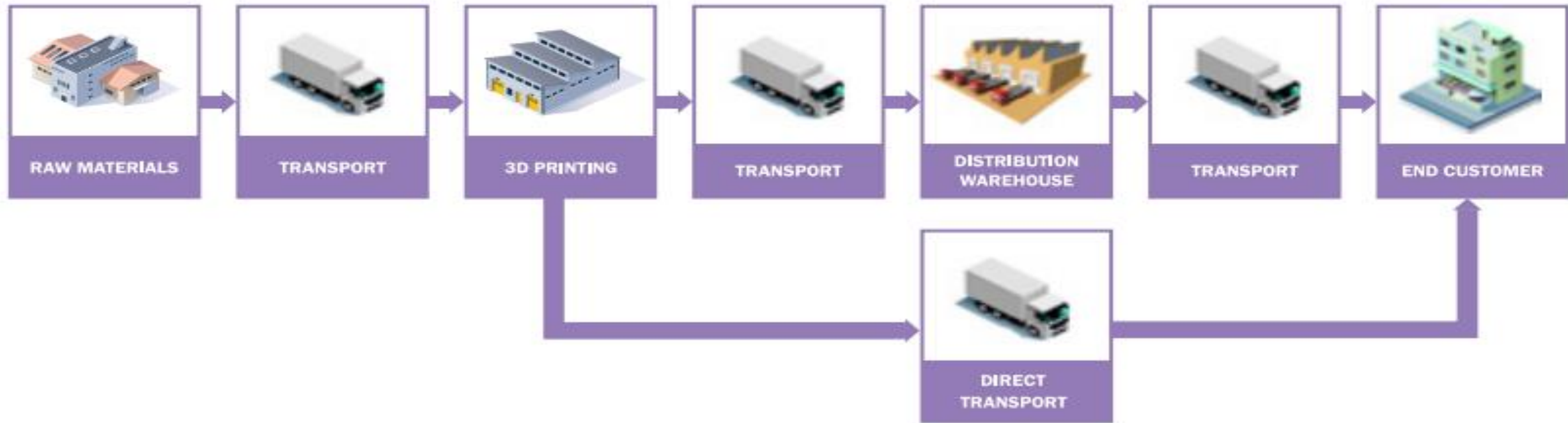
- Smaller, localized manufacturing capable of customers production

# Change of supply chain



Traditional supply chain

# Change of supply chain



Supply chain with 3D printing competence



# Impacts of 3D Printing to Customs



- Increase of raw materials

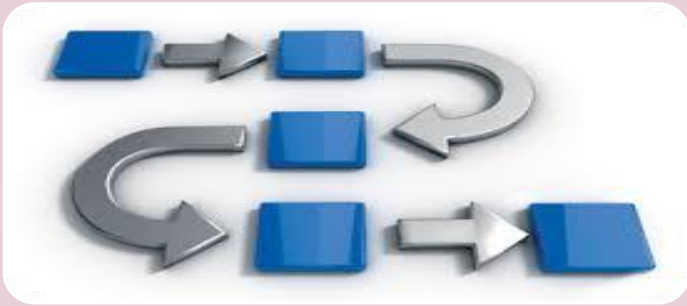


- Control of software



- AEO concept

# Possible Solutions



Review of the supply chain



Integrated supply chain management shall be applied for



Coordinated border management shall be extended to coordinated supply chain

# Possible Solutions



Owners of the 3D printers should be registered or licensed



Customs regulation should be revised

A close-up photograph of a fountain pen with a silver nib and a black barrel, positioned on the right side of the frame. The pen is in the process of writing the words "Thank you" in a cursive script on a light brown, textured paper. The ink is dark, and the pen's nib is just finishing the letter 'u'. The background is a soft, out-of-focus light brown color.

Thank you

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# Questions to be discussed

1. What's the relation between 3D printing and Industry 4.0?
2. Which kind of changes 3D printing brings to Customs control?
3. If the owner of a 3D printer prints out products designed by an overseas company? Is it a tangible international trade in goods or intangible trade?
4. Is Customs the proper government agency to control the owners of 3D printers who do not directly import goods but just print out products designed by an overseas company? Why?
5. If Customs is the proper agency to control the owners of 3D printers, does the framework of customs convention enable customs to apply the control? Or we need to revise it or even create a new one?
6. How to safeguard the IPR for the 3D printing?
7. How to ensure the security of 3D printing?