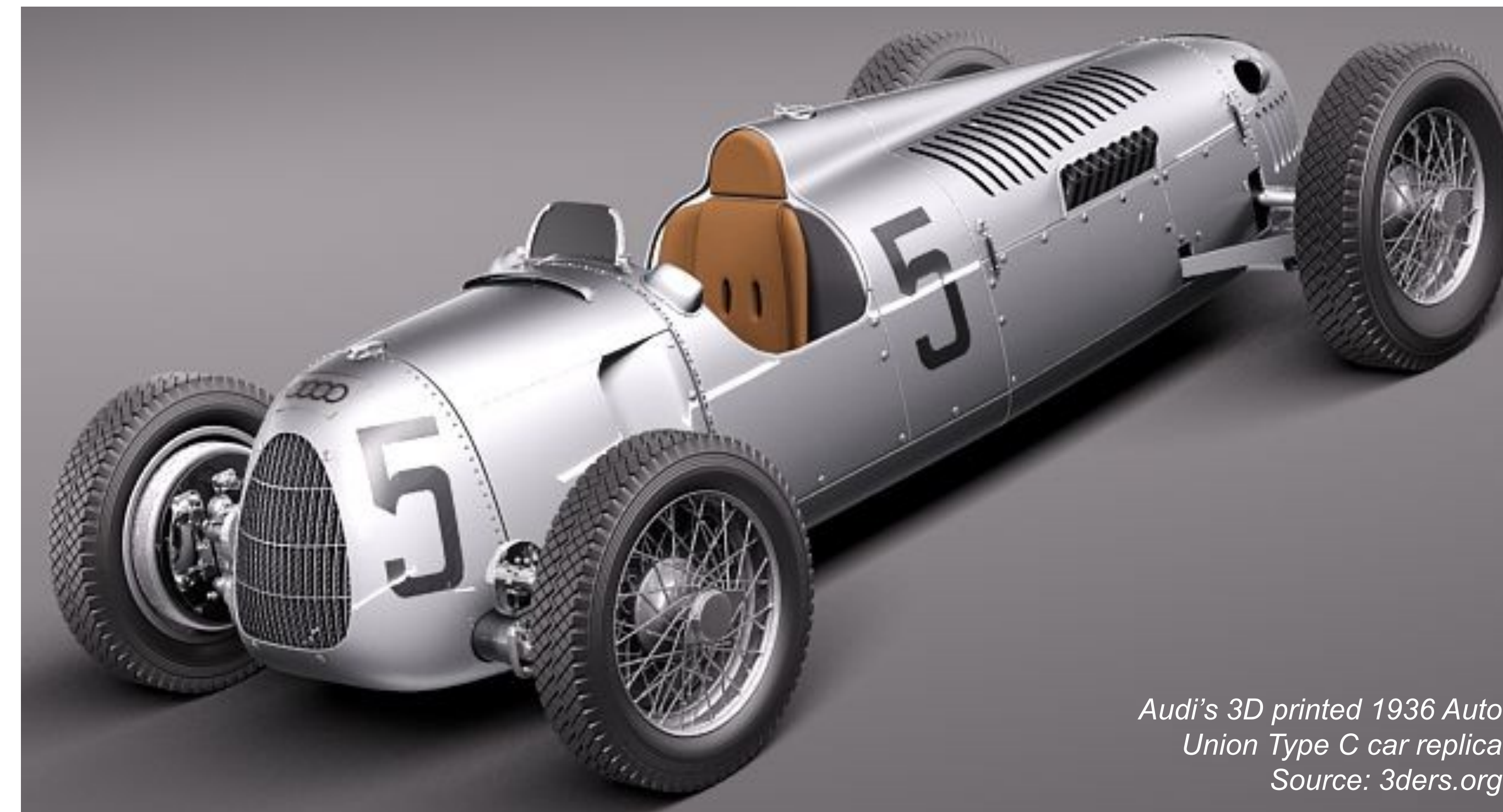
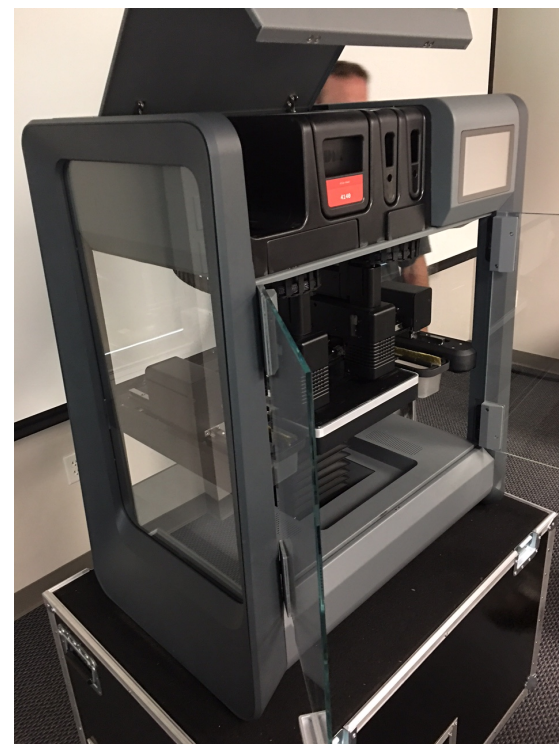


# 3D Printing's Impacts On Metalworking Industry

## Motivation / Background

In the traditional manufacturing process, materials are removed until the desired shape is formed. However, with 3D printing, product is formed by adding layers of metal powder. 3D printing could disrupt the way manufacturers create parts given its ability to create complex shapes using less raw materials and achieve shorter lead times.

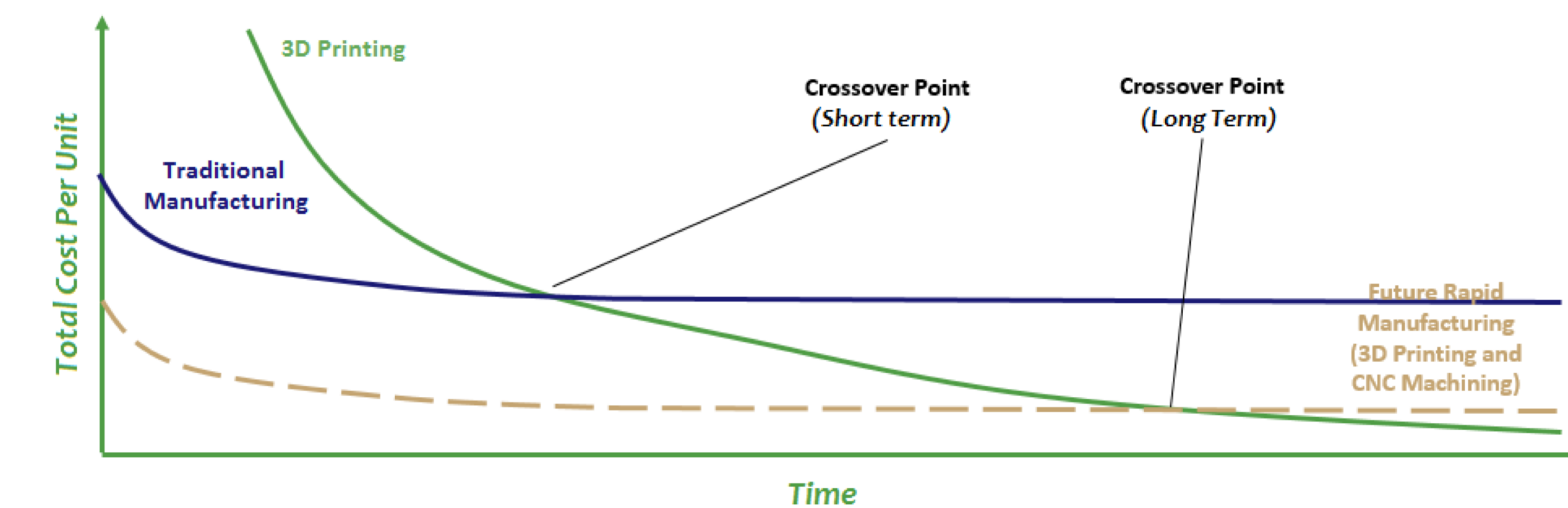
MSC is one of the key suppliers in the metalworking industry. The company wants to understand the real impact 3D printing has on its metalworking customers.



## Initial Results / Hypothesis

We believe that 3D printing will have big impacts to customers with the following characteristics in short, medium, and long term:

- Highly customized products
- Long lead time
- Low production volume
- High inventory level



## Key Questions

How will 3D printing affect MSC business?

In how much time will this technology become viable for metal working companies?

## Relevant Literature

- McKinsey & Company, *How 3-D Printing Will Transform the Metals Industry*
- DHL, *3D Printing and The Future of Supply Chains*
- A.T. Kearney, *3D Printing: A Manufacturing Revolution*
- Purdue University, *The Design for Additive Manufacturing Worksheet*

## The Supply Chain Challenge

Key benefits of 3D printing over traditional manufacturing

1. Design for optimization



2. Cost effectiveness at small scale



3. Low Waste



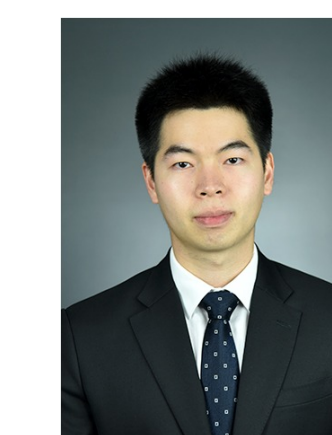
## Methodology



## Expected Contribution

- Develop case studies that will help MSC access the impact of 3D printing to its customer profile over the years
- Develop quantitative model to quantify impact of 3D printing.
- Empower the company to make decisions regarding their strategy on the next years

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