# materialise

innovators you can count on

# Materializing meaningful applications with 3D printing. Together.

Kelvin Wee Sales Director, APAC Materialise

# MEANINGFUL APPLICATIONS OF <u>3D PRINTING?</u>

materialise



# **Meaningful Problems solved with 3DP**



## **Problem Space**

# Solution Space









### **Solution Space**



### **Problem Space**



# It Takes Two to Tango!



# Welcome to Materialise







## Materialise Core Business

Materialise offers **software and services** that form the backbone of the Additive Manufacturing ecosystem.





## Materialise Core Business

Our solutions are open and neutral,

allowing all players to better manage their 3D printing process and build meaningful **3D printing applications**.



# From One Machine to the Backbone of 3D Printing Technology

# Leuven - 1990



First anatomical model

First releases of Magics and Mimics software

# materialise



**Materialise Today** 



# **Co-Creation**

The Key to Finding Meaningful Applications

# **Suction Gripper**

#### From Milling and Machining to Metal 3D Printing













#### The goals

- Reducing material volume to reduce costs and save weight
- Integrating functionality to reduce assembly costs
- Increasing wear resistance to increase part lifetime





#### **Original Design**

#### The starting point

- Expensive to produce (machining + assembly)
- Lead-time 6 weeks
- Risk of incorrect positioning
- Part lifetime max. 3 months







- €900 + assembly
- 📂 237g
- 3 months









€900 + assembly

- 📂 237g
- 3 months



- €60 + assembly
  - 🗕 130g
- **N**.A.











#### Assembly

- Less assembly time
- Lower risk of wrong assembly
- Less frequent maintenance

#### **Material Costs**

- Minimum material volume
- Minimum support structure

#### Utility

- Less leakage risk
- Faster cycle times
- Increase life time of arm

To take full advantage of 3D Printing, rethink your design.

#### Final Design: Addressing the goals

# **Philips Lighting** 3D Printing Becomes Essential Production Thinking

- Production tools 3D-printed in metal
- Clever design that follows function
- Cost savings of around €89,000 a year in operational benefits



# Thank you for your attention!



# **Questions?**

Kelvin Wee kelvin.wee@materialise.com.my

