

# REALITY IS OVERRATED

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Università degli Studi  
Mediterranea  
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UNIVERSITÀ DEGLI STUDI DI NAPOLI  
FEDERICO II



UNIVERSITÀ  
DEGLI STUDI  
DEL  
SANNIO  
Benevento



IMEKO



associazione italiana  
gme  
gruppo misure  
elettriche ed elettroniche



Gruppo Nazionale  
MMT



I. GO  
Ph.D. School ITALO GORINI

International Ph.D. Excellence School  
**ITALO GORINI 2021**







Innovation Attitude

Mare Group designs and implements  
technology innovation  
for Industrial Corporations, SMEs and Public Administration.



Advisoring



Technology



Engineering



**20 years**  
experience



**400 clients**  
worldwide



**10 collaborations**  
with universities and research centers



**22 million euro**  
group turnover in 2020



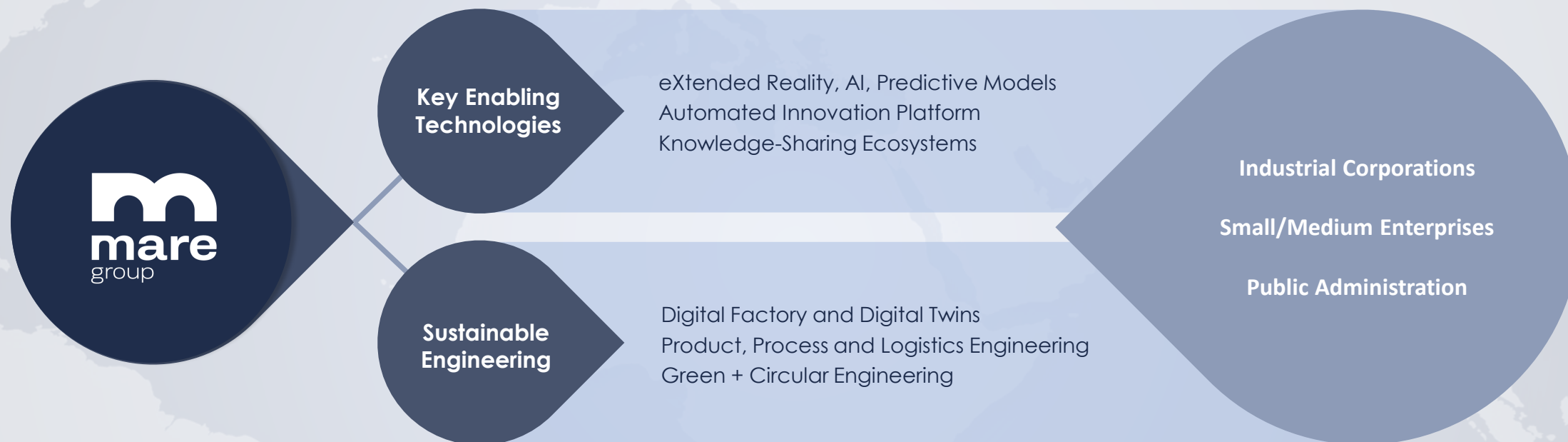
**210 employees**  
in Italy and abroad



**20% R&D investments**  
on global turnover

## 16 Offices in 5 Countries



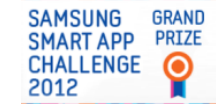








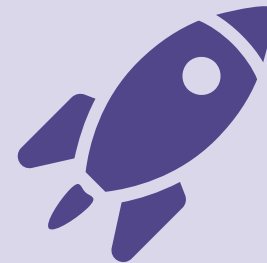
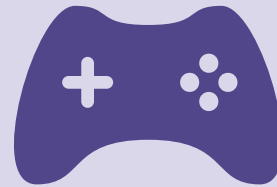
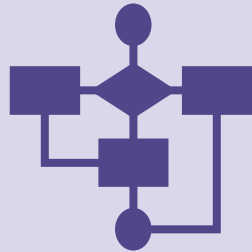
## Awards



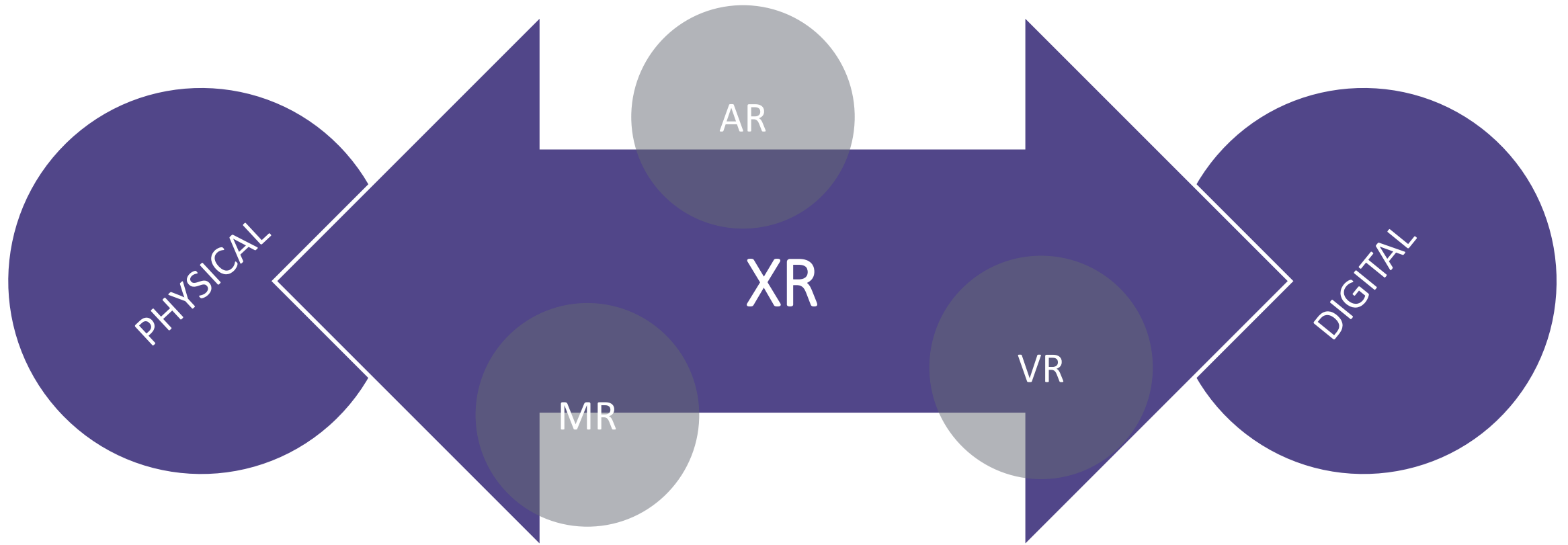
## Certifications



# GIOVANNI CATURANO



**WHICH REALITY?**



# APPLICATIONS

- Training
- Support
- Design
- Marketing
- [...]

# NEW INTERFACE

- New tools need new interfaces
- Not just visualize
- We're inventing the double-click

# HARDWIRED

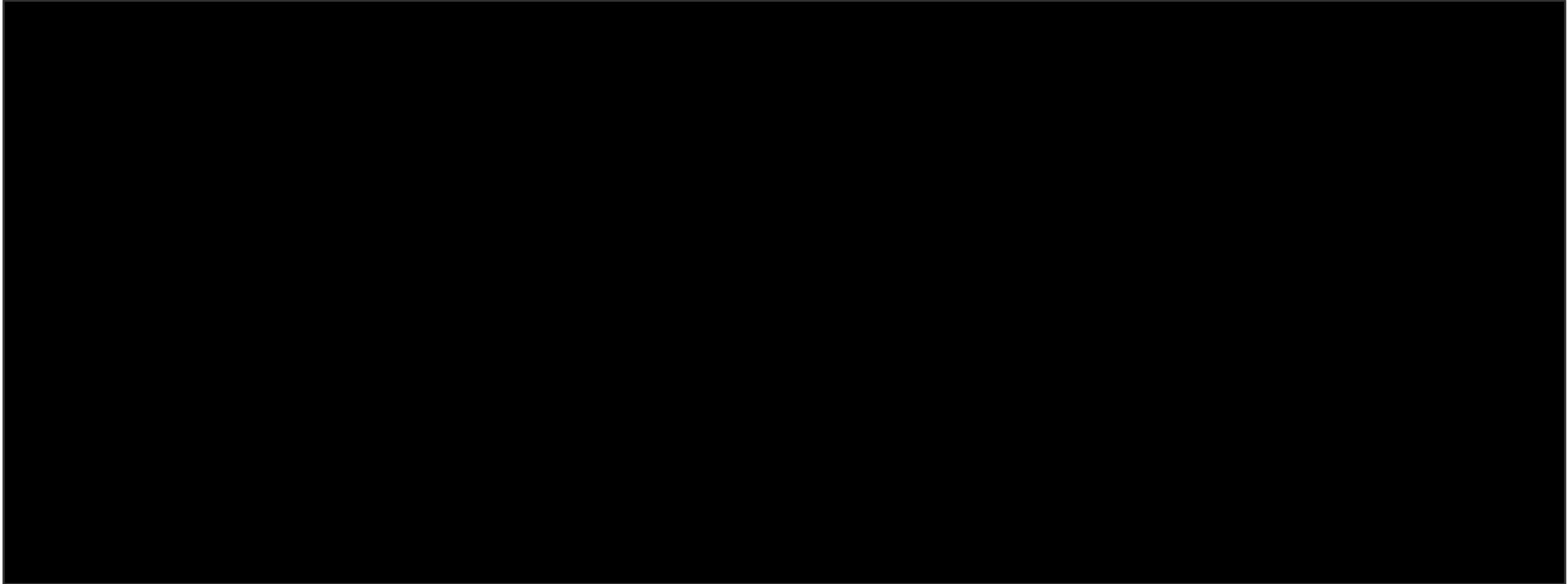
- Our sight has no frame
- Our hands are our main tool
- Our brain is spatial



# EVOLVE TOWARDS SUPERPOWERS



# HANDSFREE



# Drag'n'Drop

- The Feedback issue



# Constraints

- How they look



# The measurement issue

- How long is this?
  - How long is... what!

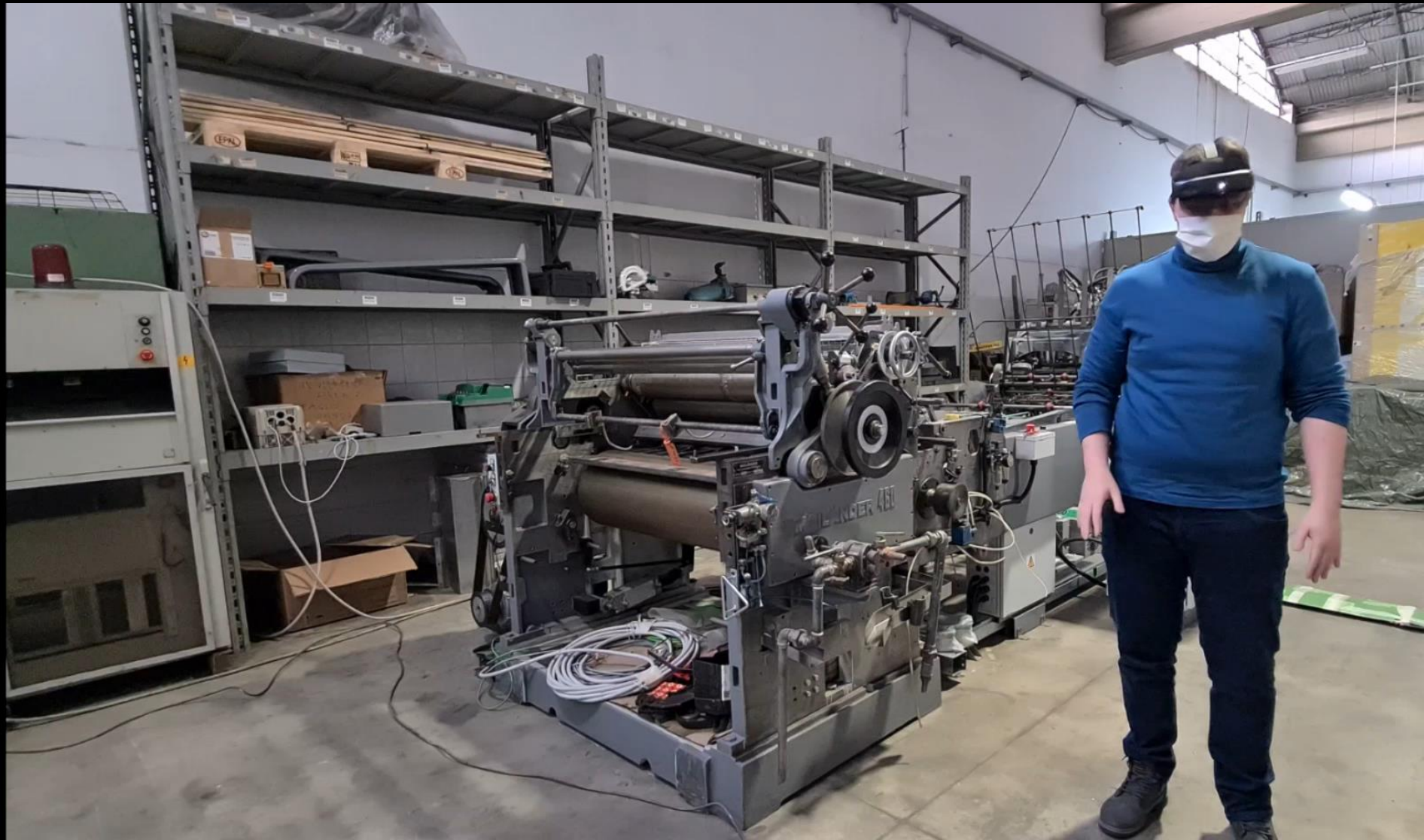


0,55 m



## Content from outside

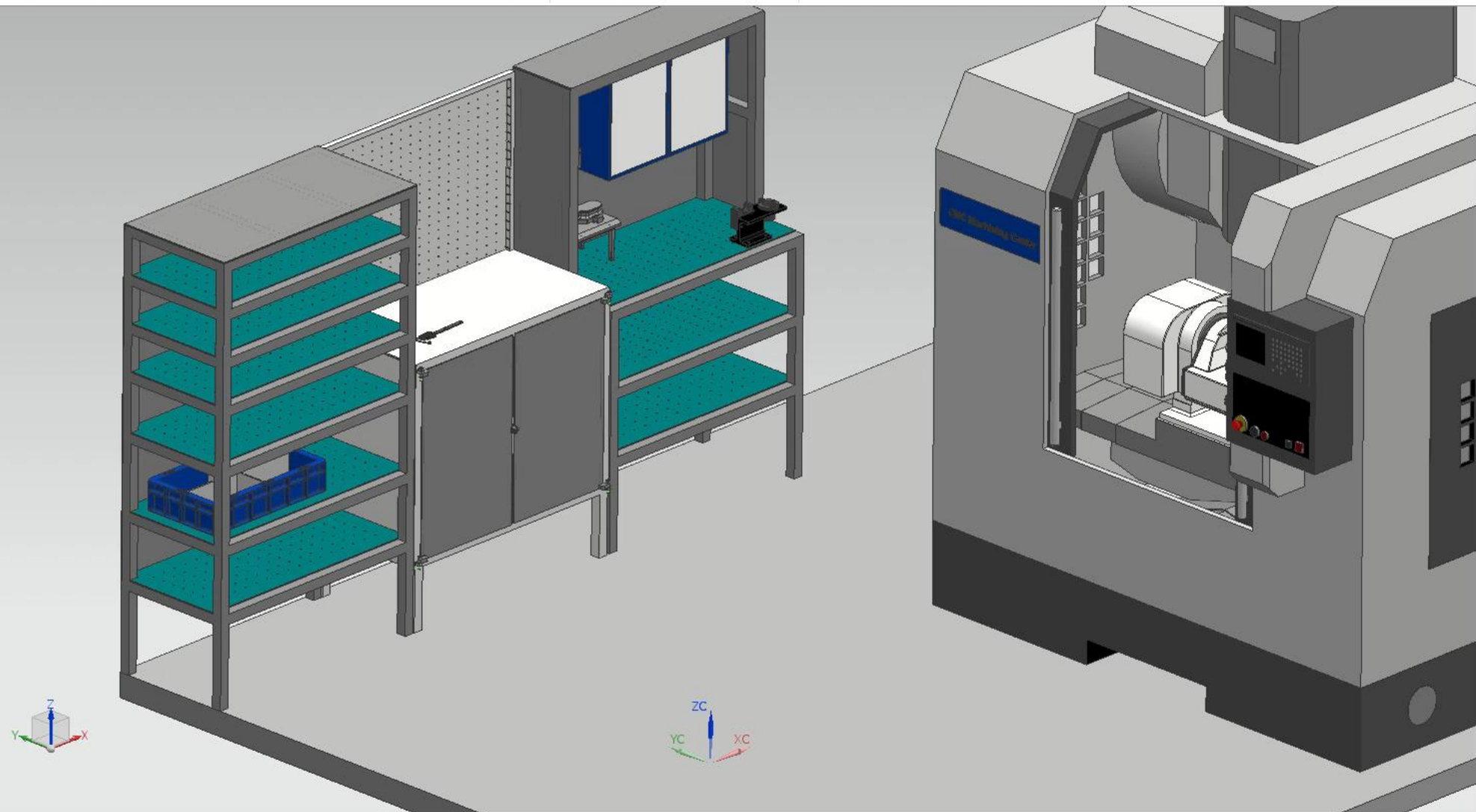
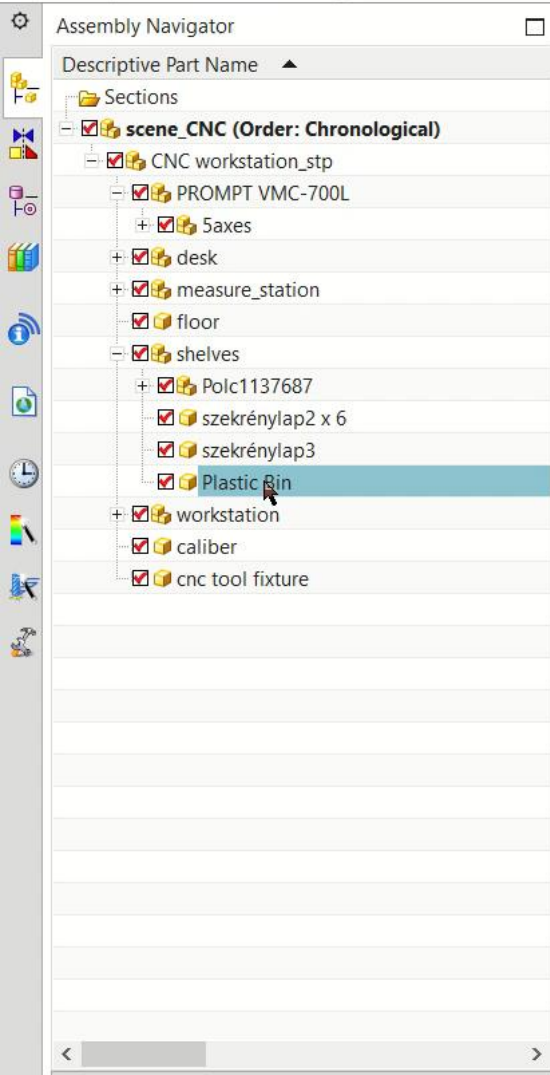
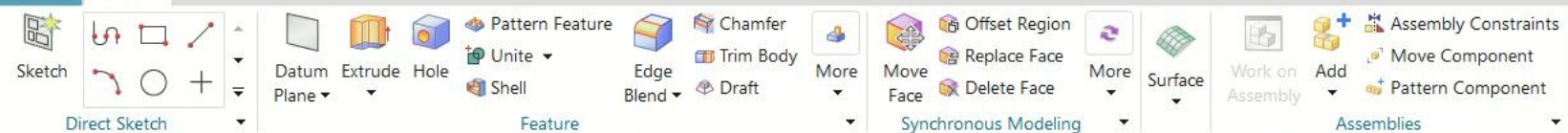
- Not as easy as superimposing information on screen



**AUTHORING PROCEDURES**  
**TELL ME WHAT TO DO WITHOUT TELLING ME WHAT TO DO**

# Working with hierarchies

- What is a hierarchy?
- Define descriptors
- Insert nodes



File Home **Assemblies** Curve Surface Reverse Engineering Analysis View Render Tools Application Flexible Pipe

Find a Command

Sketch: Sketch, Direct Sketch

Feature: Datum Plane, Extrude, Hole, Unite, Shell, Chamfer, Edge Blend, Trim Body, Draft

Synchronous Modeling: Offset Region, Replace Face, Delete Face, Move Face

Work on Assembly: Add, Move Component, Pattern Component

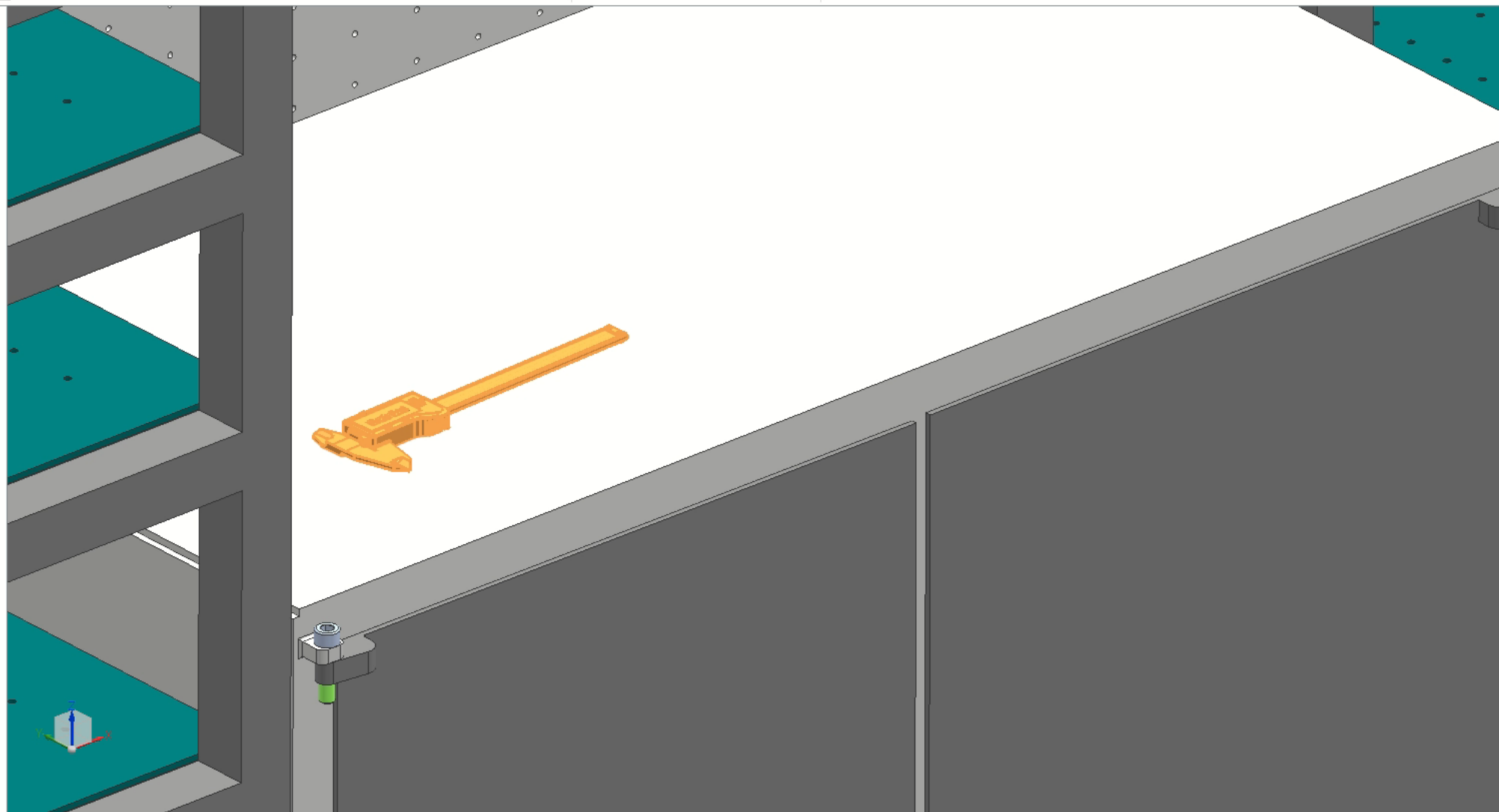
Assemblies: Assembly Constraints

Menu No Selection Filter Entire Assembly

Assembly Navigator

Descriptive Part Name

- Sections
- scene\_CNC (Order: Chronological)
  - CNC workstation\_stp
    - PROMPT VMC-700L
    - desk
    - measure\_station
    - floor
    - shelves
    - workstation
    - caliber**
    - Plastic Bin
    - 5axes
    - cnc tool fixture



# SAMPLE RESULTS





# SHARING KNOWLEDGE (REMOTE SUPPORT)



**HOW ABOUT EVERYDAY LIFE?**

# THE COCKTAIL POWER



# VIRTUAL OR REAL?



**VIRTUAL IS REAL**

**BULKY? EXPENSIVE? UGLY?**





**VIRTUAL** HAS NEVER BEEN SO **REAL**