

# Value Offer 2021



[nubus.com.mx](http://nubus.com.mx)

# Our evolution...



Founded as an  
**engineering  
services partner**

2013



2015



Kicked-off **micro  
laser welding  
for tooling** repair  
& refurbishment

2018



Started **CNC  
manufacturing  
& Laser  
assembly**

2019



Incorporated  
**EDM & Grinding**  
to consolidate a  
**one-stop  
solution for  
tooling** services

2020



Received our  
**ISO 9001:2015**  
certification

2021



Started **high-  
speed  
conventional  
manufacturing**  
+ launched **laser  
engraving &  
marking**  
services

[nubus.com.mx](https://nubus.com.mx)

# Our Services



## Manufacturing & Assembly

- Laser-welding assembly
- CNC machining
- EDM
- Laser engraving & marking
- Conventional high-speed machining

## Tooling services

- Tooling, spares & components fabrication
- Repair & Refurbishment
- Preventive maintenance
- Engineering changes
- Reverse engineering

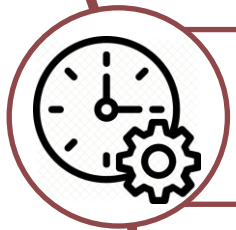


# Manufacturing & Assembly

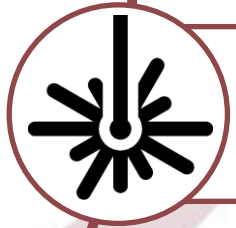
# One-stop shop: from prototype to production



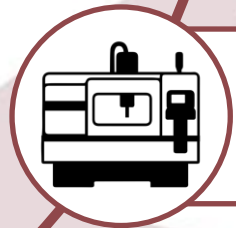
**ISO 9001:2015 certified**



**APQP & Project Management**

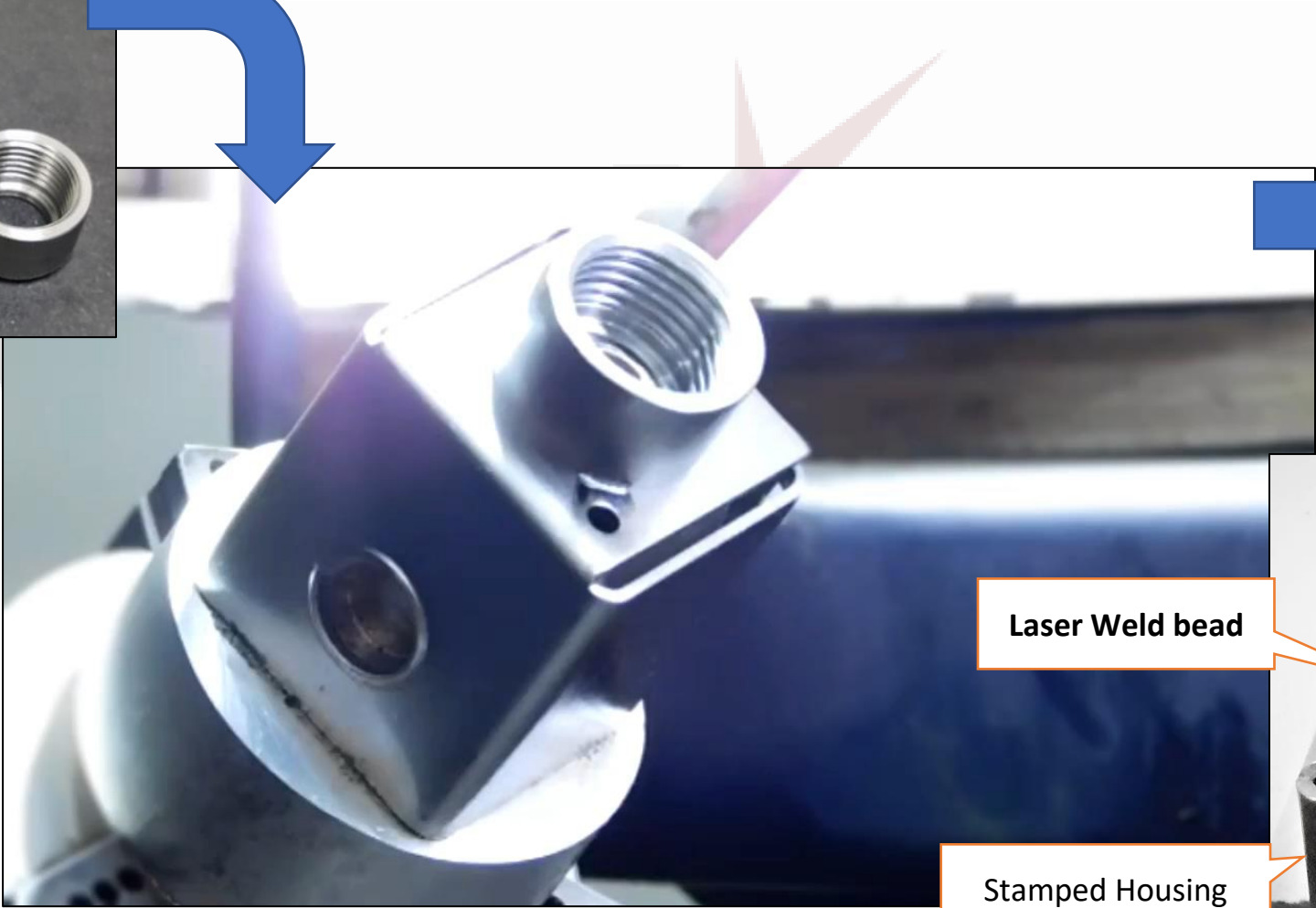
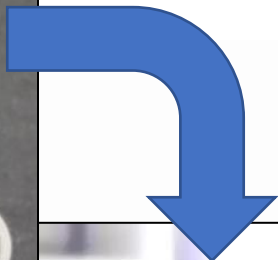


**Laser-welded assembly:** from prototype to production + internal support equipment development → **shorter leadtimes and lower costs**



**In-house Manufacturing:** CNC + EDM + Grinding + Conventional high-speed machining + Laser engraving

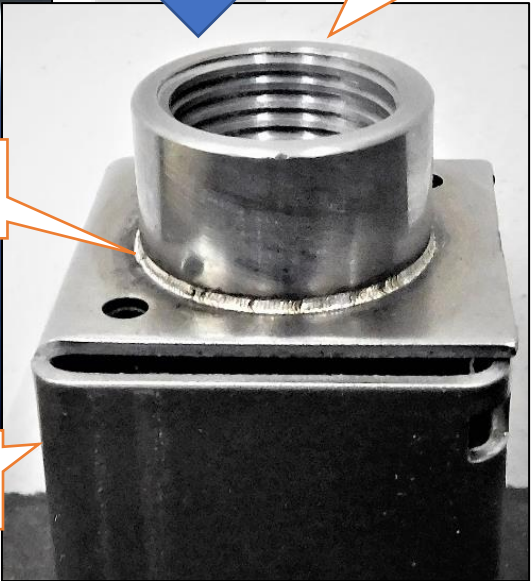
# Laser welding assembly: bushing & housing assy



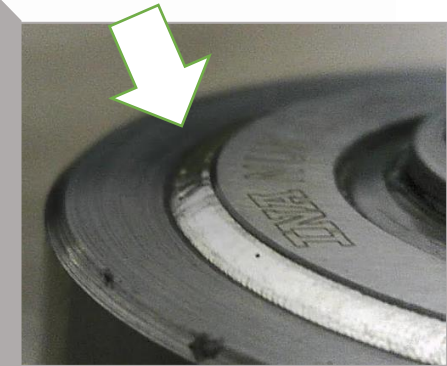
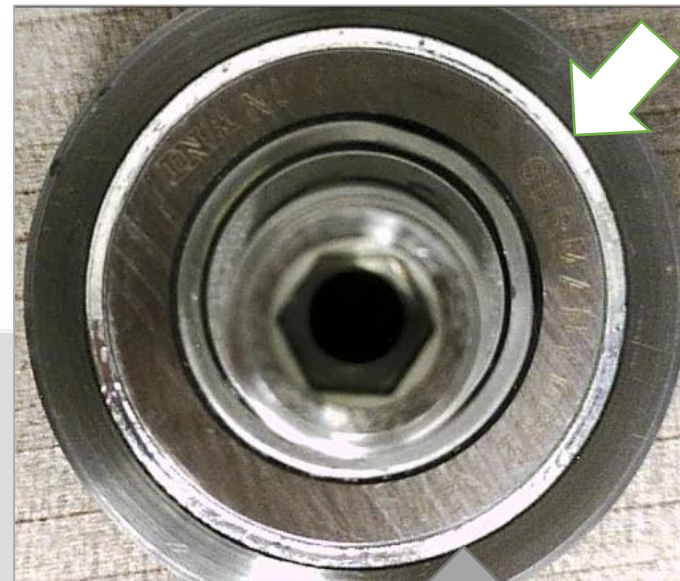
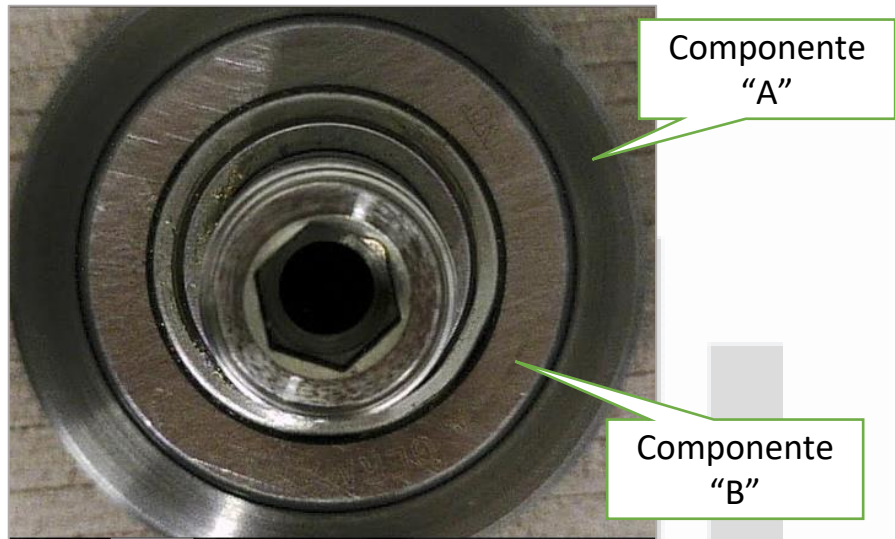
Bushing: machined  
in-house

Laser Weld bead

Stamped Housing



# Laser welding assembly: bearing assembly



**No thermal distortion  
for high-precision assy**

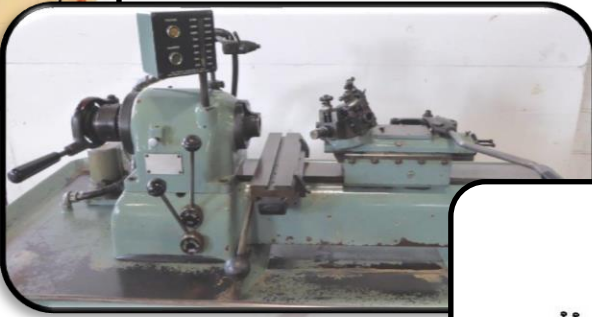




# Manufacturing technologies



**CNC Machining  
with 4th axis**



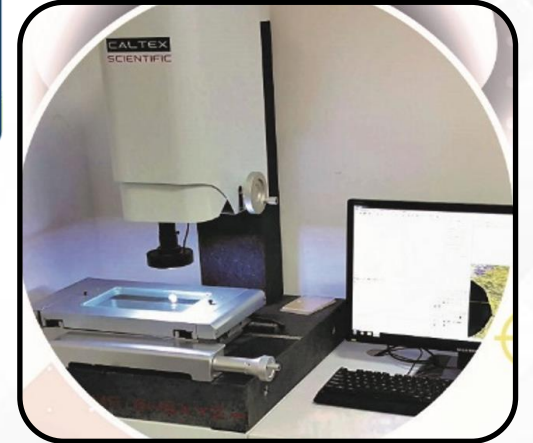
**Conventional high-  
speed machining**



**EDM**



**Laser  
Marking**



**Contactless inspection  
system (X-Y-Z)**







# CNC & Conventional high-speed machining

**Nubus**  
PRECISION

# Tooling Services

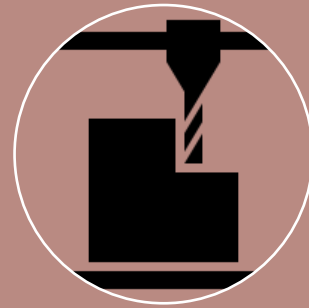
# Integrated offer: one-stop shop



**Tooling Repair**



**Tooling  
Preventive  
Maintenance &  
Spares fabrication**



**Tooling &  
Precision devices  
design and  
manufacturing**



**Laser marking  
and texturing**

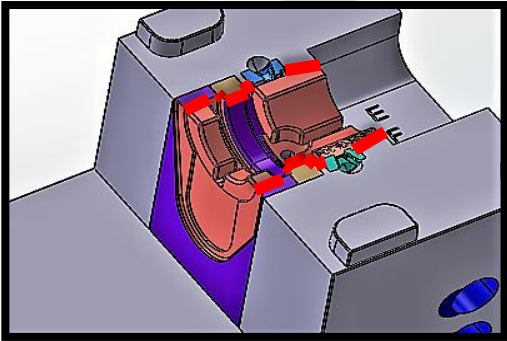
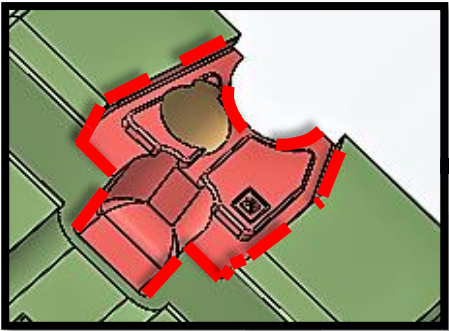




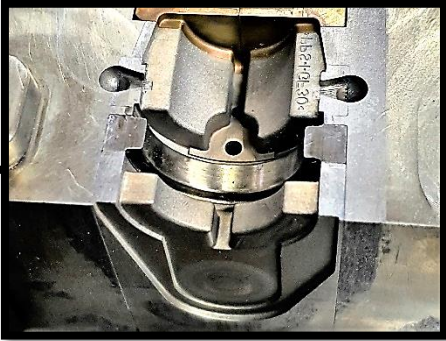
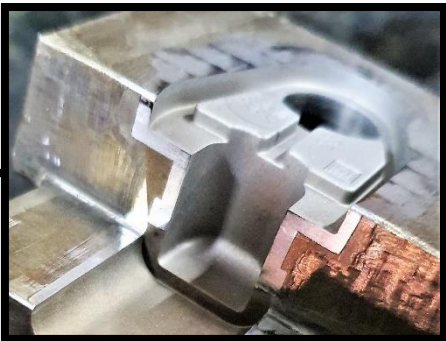


# Tooling Repair

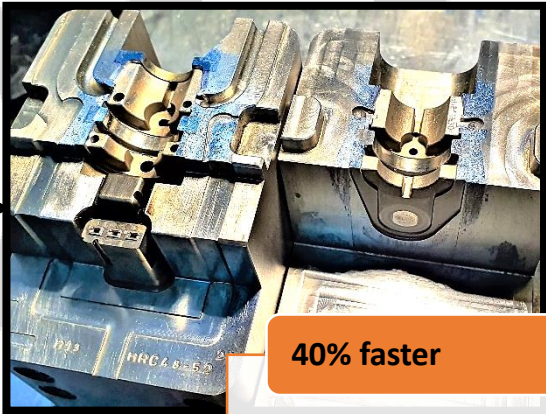
## Diagnosis & Planning



## Tooling Restitution



## Repair Validation



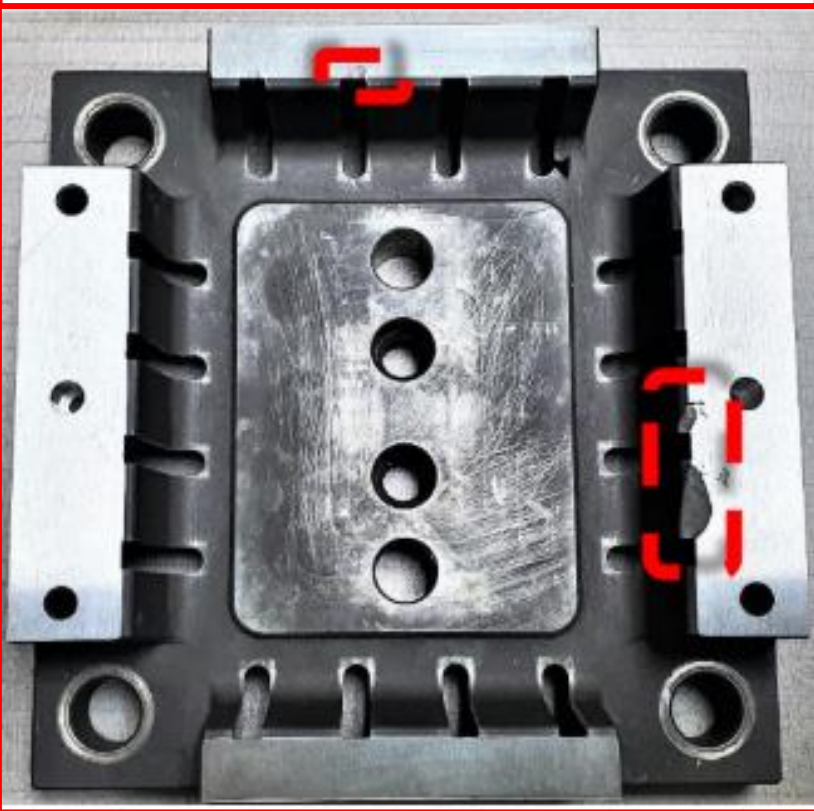
- 40% faster
- Up to 65% cheaper
- Integrated solution: 1 single source

# Tooling Repair

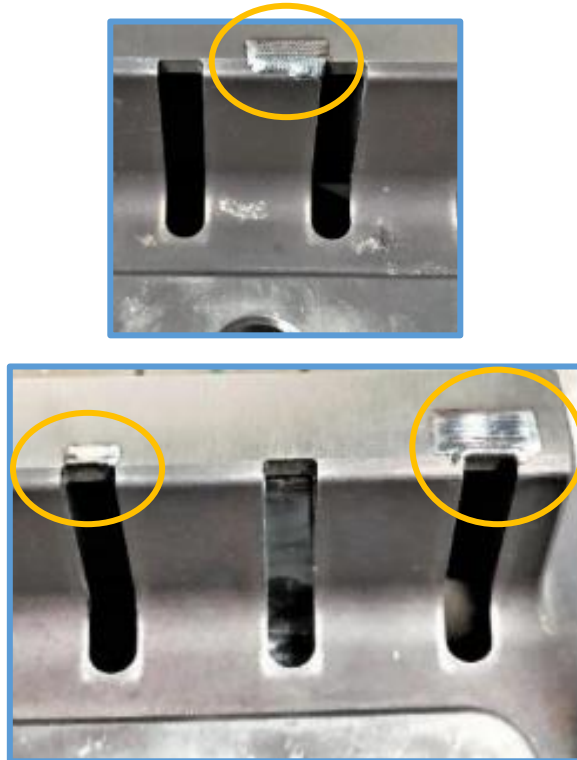


6 hours reaction time from beginning to end!

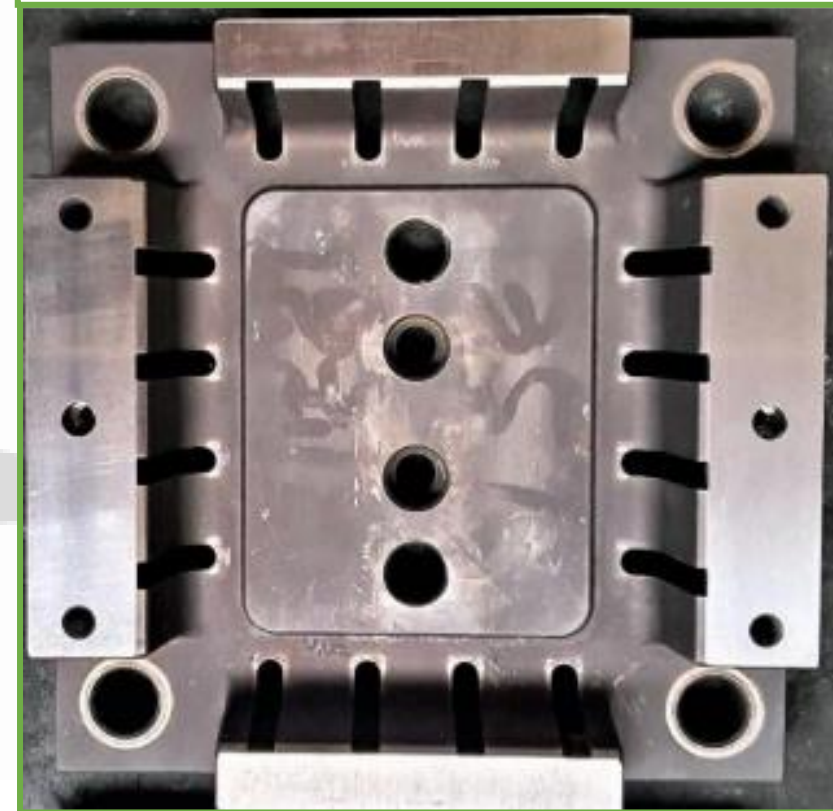
Tooling damage



Laser welding filling

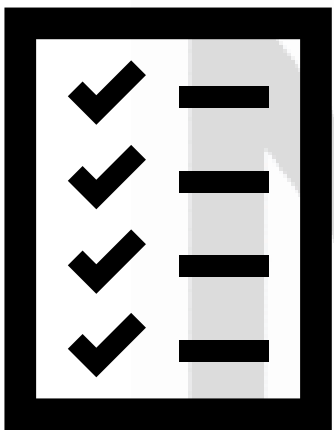


Ground surface: ready for operation





# Preventive Tooling Maintenance



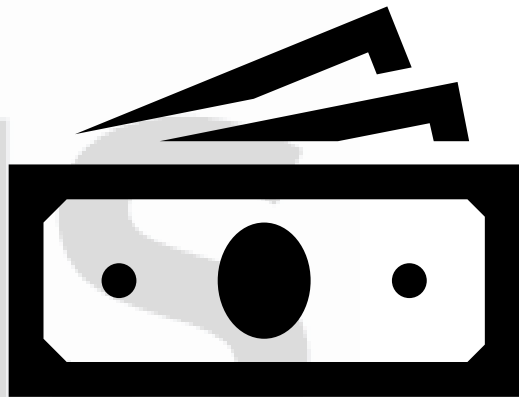
**Systematic Diagnosis & Execution**



**Engineers & Technicians with +10  
years of experience and  
specialized training**



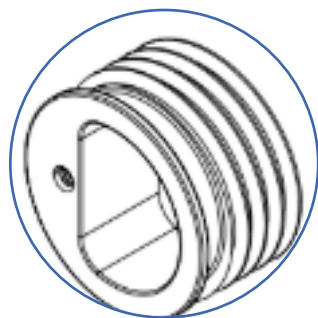
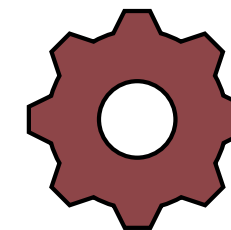
**On-time delivery guarantee**



**Cost transparency &  
competitiveness**

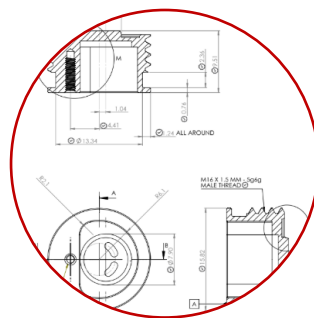


# Spares fabrication



**Initial concept  
development**  
**“Functionality”**

**We can do it even  
without prints!**



**Final engineering info  
release**  
**“Manufacturability”**



**Fabrication**  
**“Execution”**

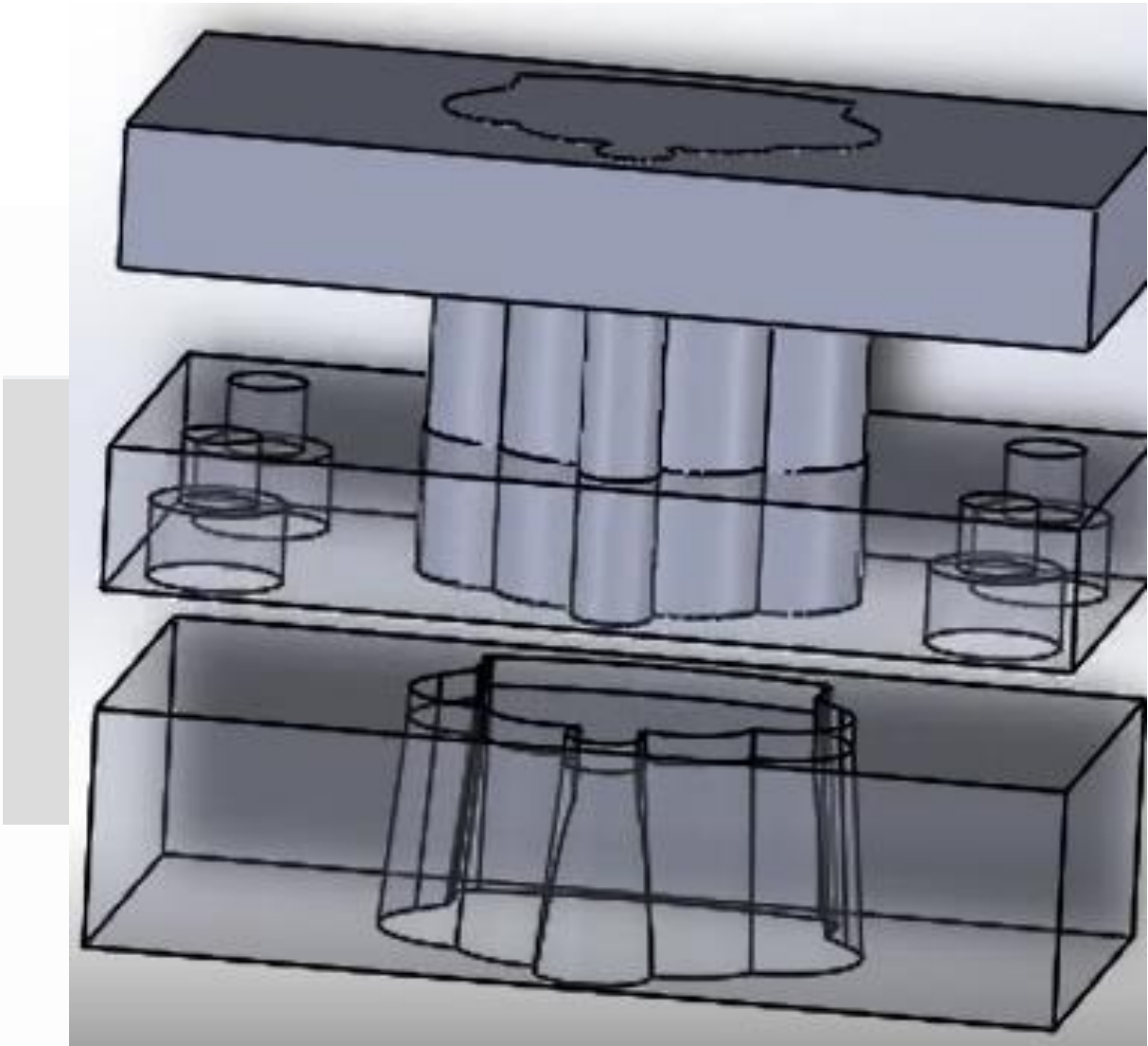
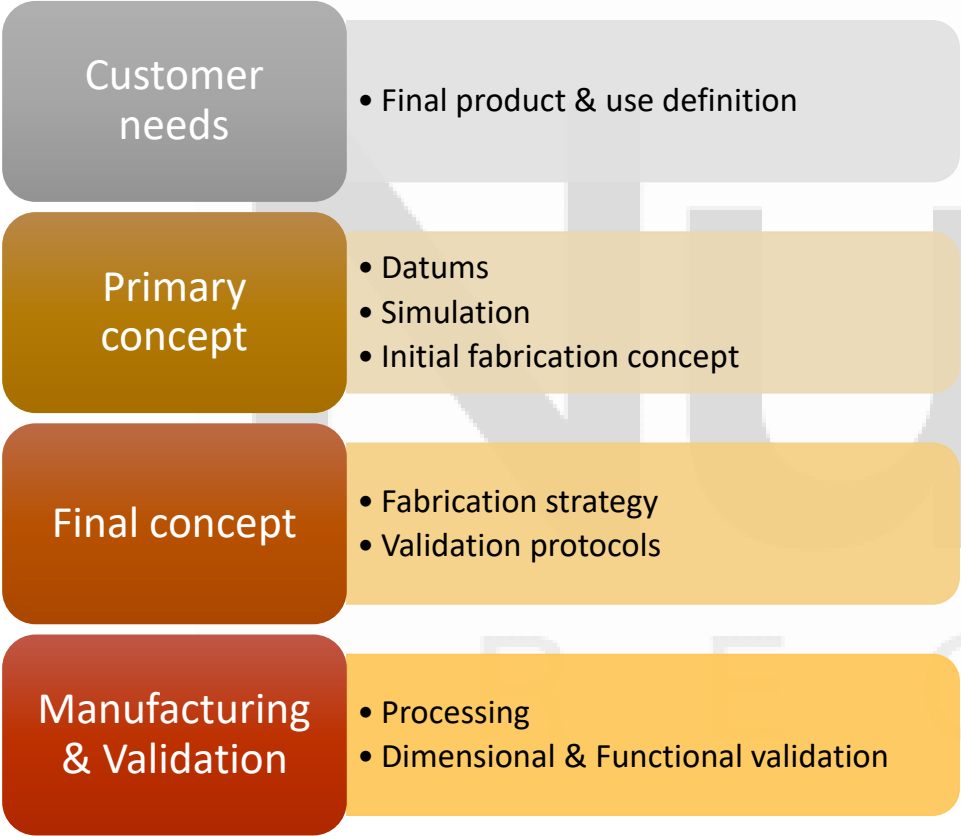


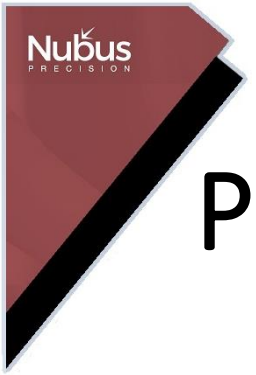
**Validation**  
**“Quality Confirmation”**

From concept to final component

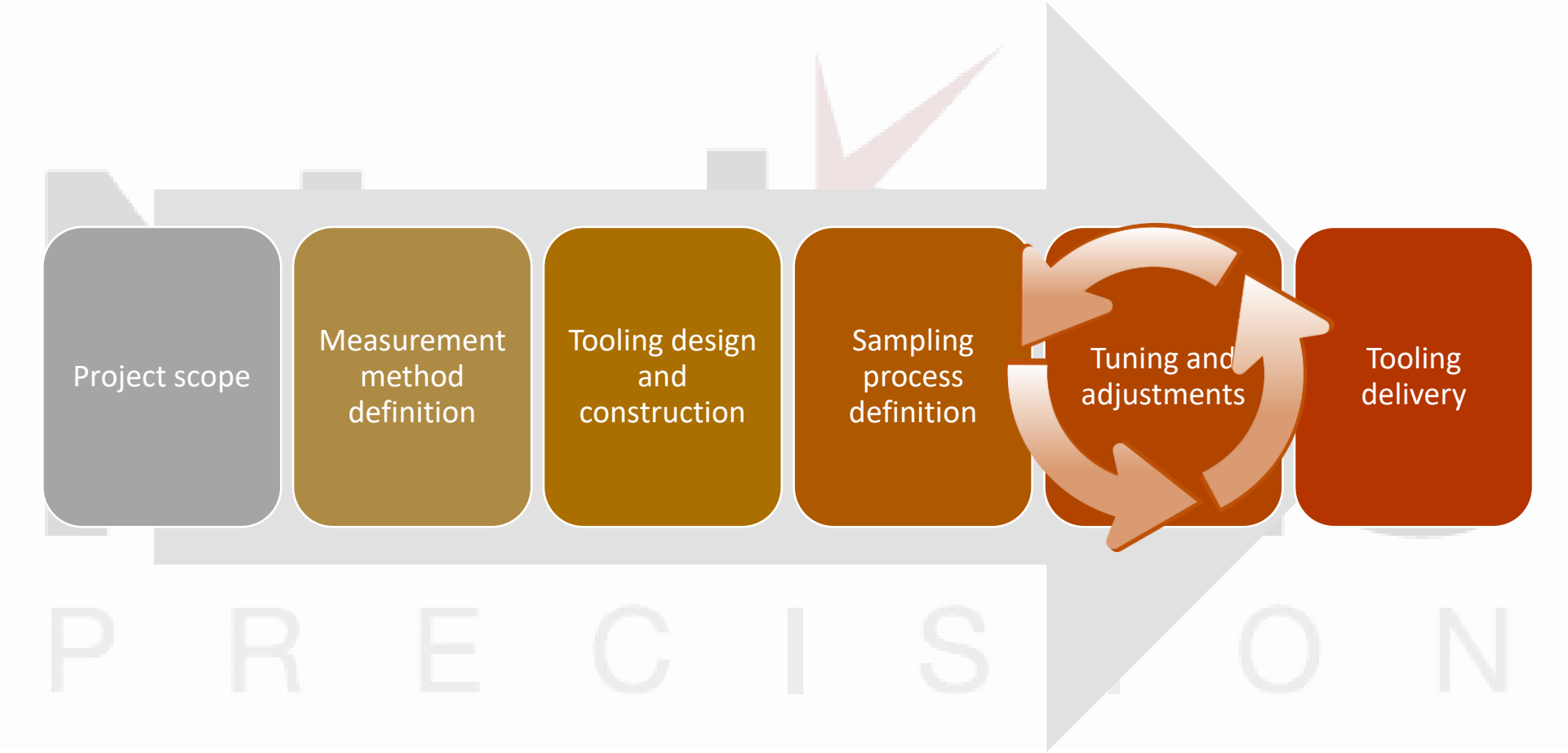


# Tooling & Precision devices design and manufacturing





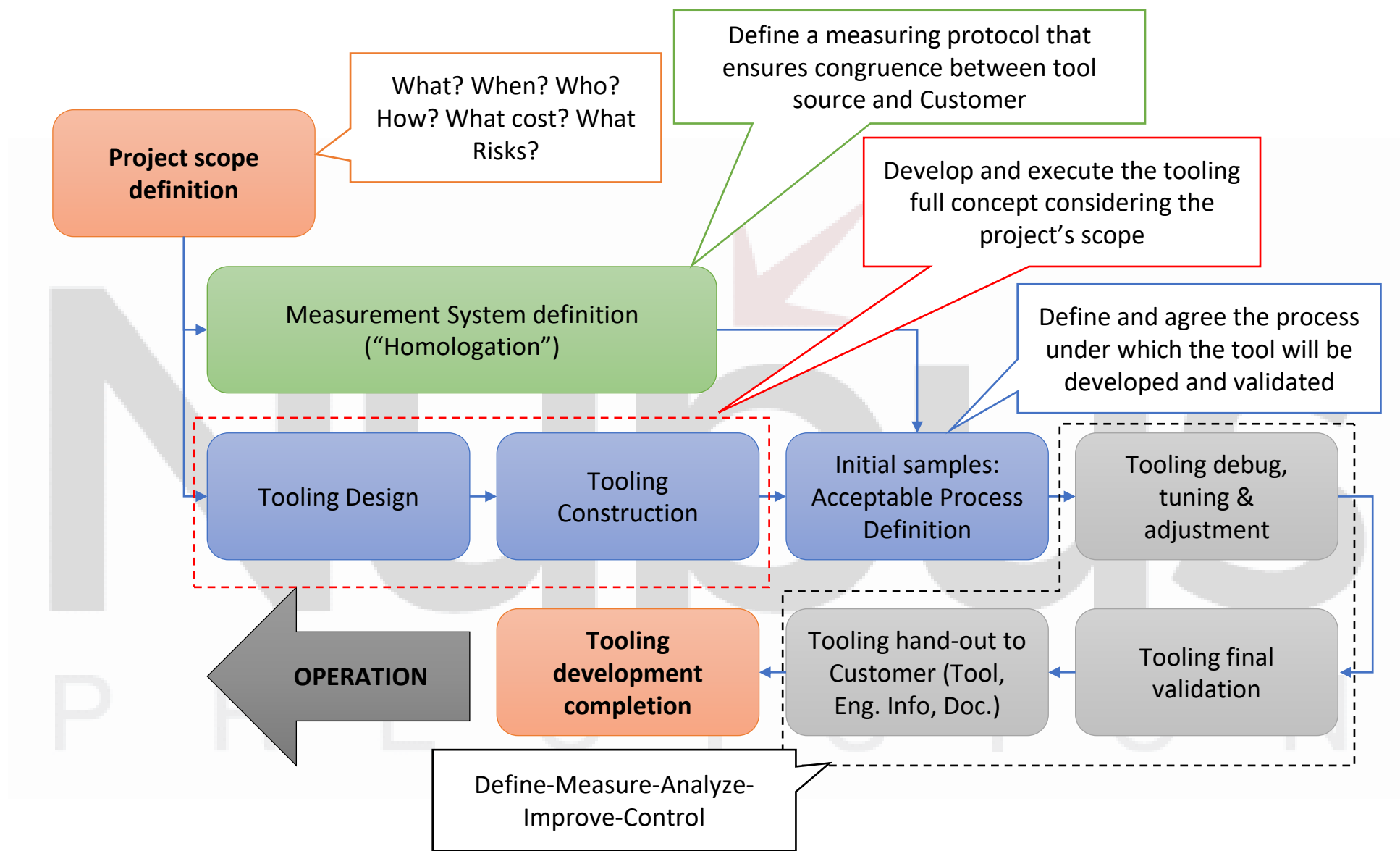
# Process Overview



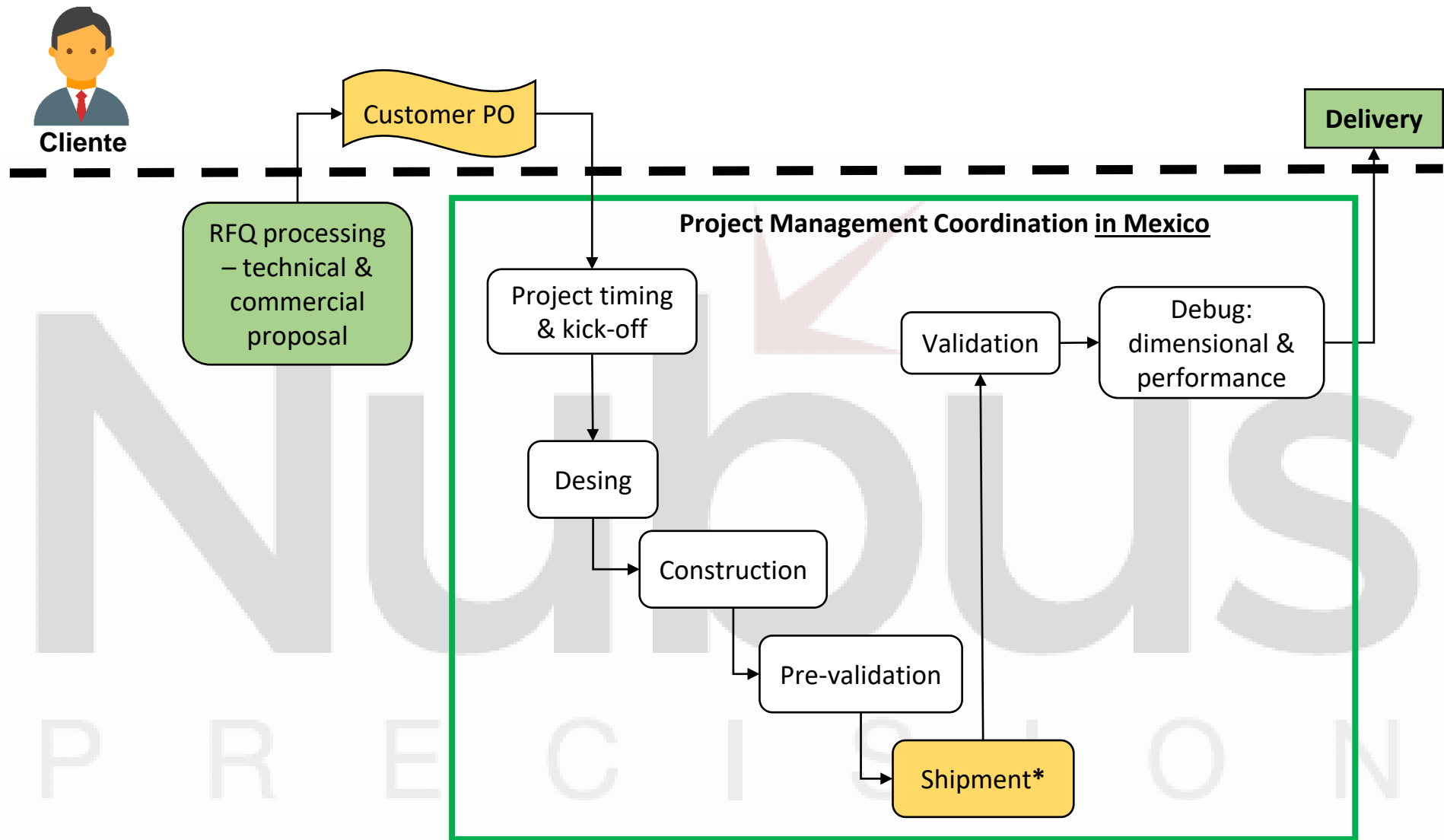




# Tooling development detailed process



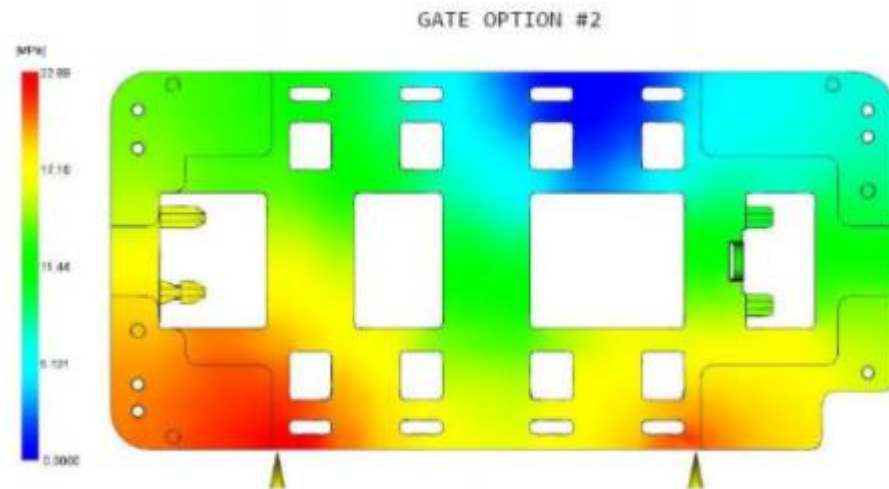
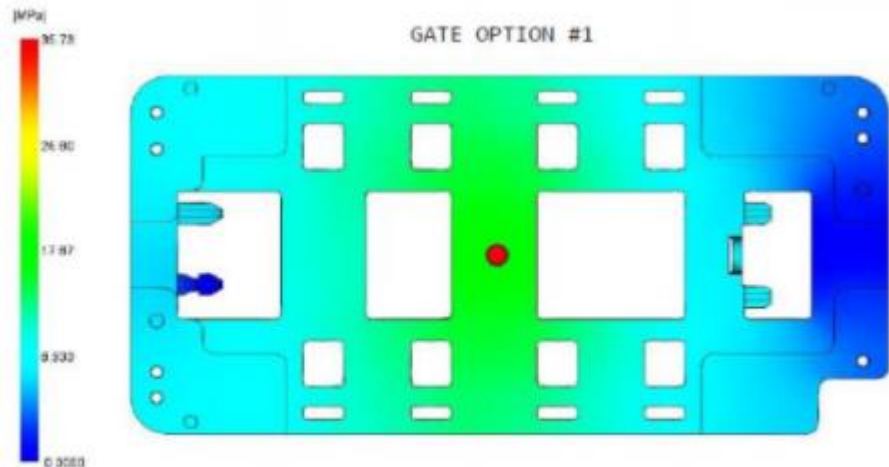
# Tooling Project: development sequence



\* To customer facility for validation and customer's technical staff training by Nubus team

# Mold flow analysis

Through **Finite Elements Analysis** we define the best **part and tool configuration** to maximize component **dimensional stability** and **process efficiency**



MATERIAL PROCESSING CONDITIONS

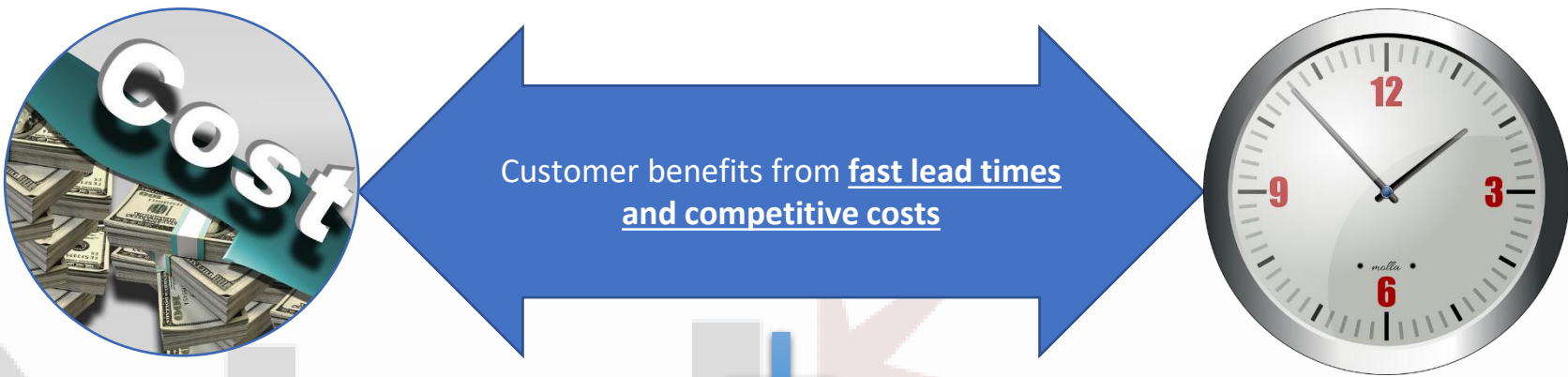
Mold surface temperature	65	C
Melt temperature	265	C
Mold temperature range (recommended)		
Minimum	45	C
Maximum	85	C
Melt temperature range (recommended)		
Minimum	245	C
Maximum	285	C
Absolute maximum melt temperature	305	C
Ejection temperature	95	C
Maximum shear stress	0.4	MPa
Maximum shear rate	40000	1/s

ACTUAL PROCESSING CONDITIONS

Mold temperature [45.00;85.00] C	70.00	
Melt temperature [245.00;285.00] C	270.00	
Maximum injection pressure limit		
Maximum machine injection pressure [10.00;500.00] MPa	250.00	
<input type="checkbox"/> Automatic velocity/pressure switch-over		
Velocity/pressure switch-over by volume %	95.00	
Machine injection time		
<input checked="" type="checkbox"/> Automatic injection time		
Time (sec):	0.0	
Machine clamp open time		
Time (sec):	5.00	
Packing profile		
Time vs.	absolute pressure	
Plot		
Step	Duration (s)	Pressure (250.00 MPa)
1	0.00	100.00
2	7.00	100.00
3		
<input type="checkbox"/> Automatic cooling time		
Time (sec):	10.00	



# Benefits



Project complexity is minimized for Customer by interacting with a local team in Mexico

No time zone restrictions



No language restrictions



Local Technical support



# Some samples of our jobs



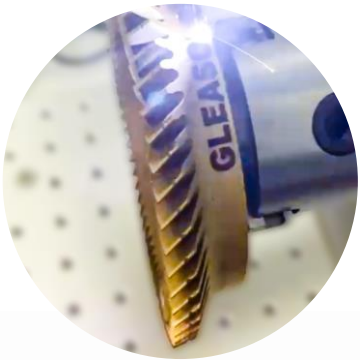
P R E C I S I O N



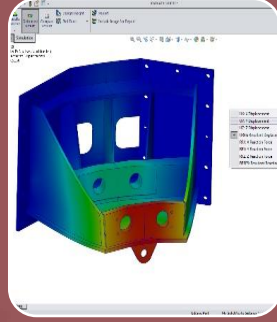


# Laser engraving & texturing

Our laser & EDM technology allows **high-definition shapes and textures** on any metal, on **flat or cylindric profiles**



# Our Technology



**CNC Machining  
4-axis**

**Laser micro-  
welding**

**Grinding**

**EDM**

**Sandblasting**

**Laser  
engraving and  
texturing**

**Metrology  
Vision 3D**

**CAD  
CAM**

# Our diferentiators



Pick-up and delivery **FREE OF CHARGE\***



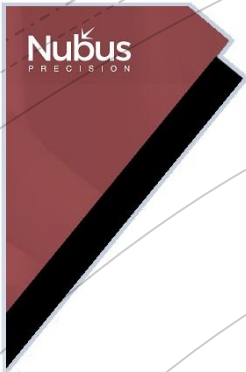
Immediate response **24/7 & On-time delivery**



**Quality guarantee for every job**

\* Within Guadalajara's Metropolitan Area, up to 1 Ton





To be recognized  
as a key partner to drive  
productivity and competitiveness to  
world-class levels in the metal-mechanical industry



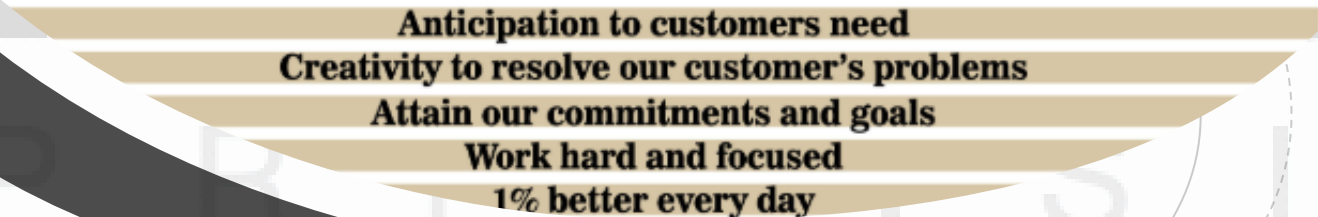
Service of  
Excellence

To actively collaborate with our Customers  
to eliminate down time, rework and  
inventory levels



Technological  
Innovation

**Nubus**  
PRECISION



**Anticipation to customers need**

**Creativity to resolve our customer's problems**

**Attain our commitments and goals**

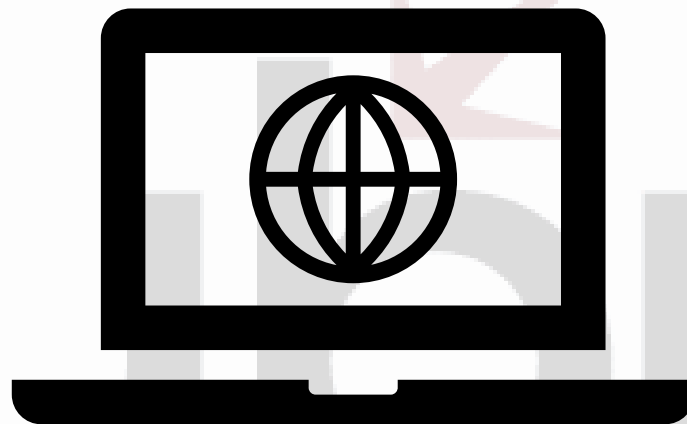
**Work hard and focused**

**1% better every day**





**(33) 33 3216 7719**



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