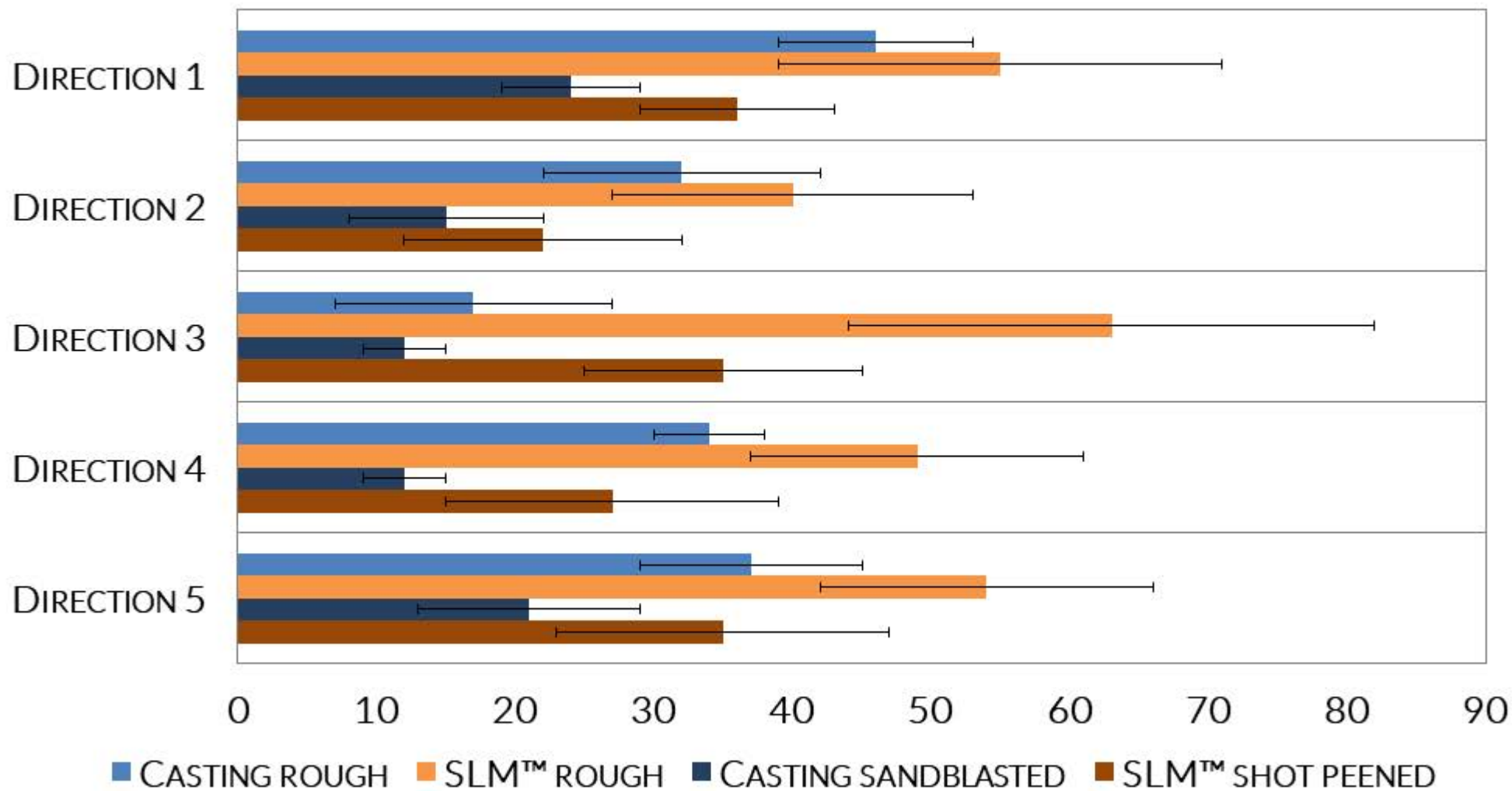


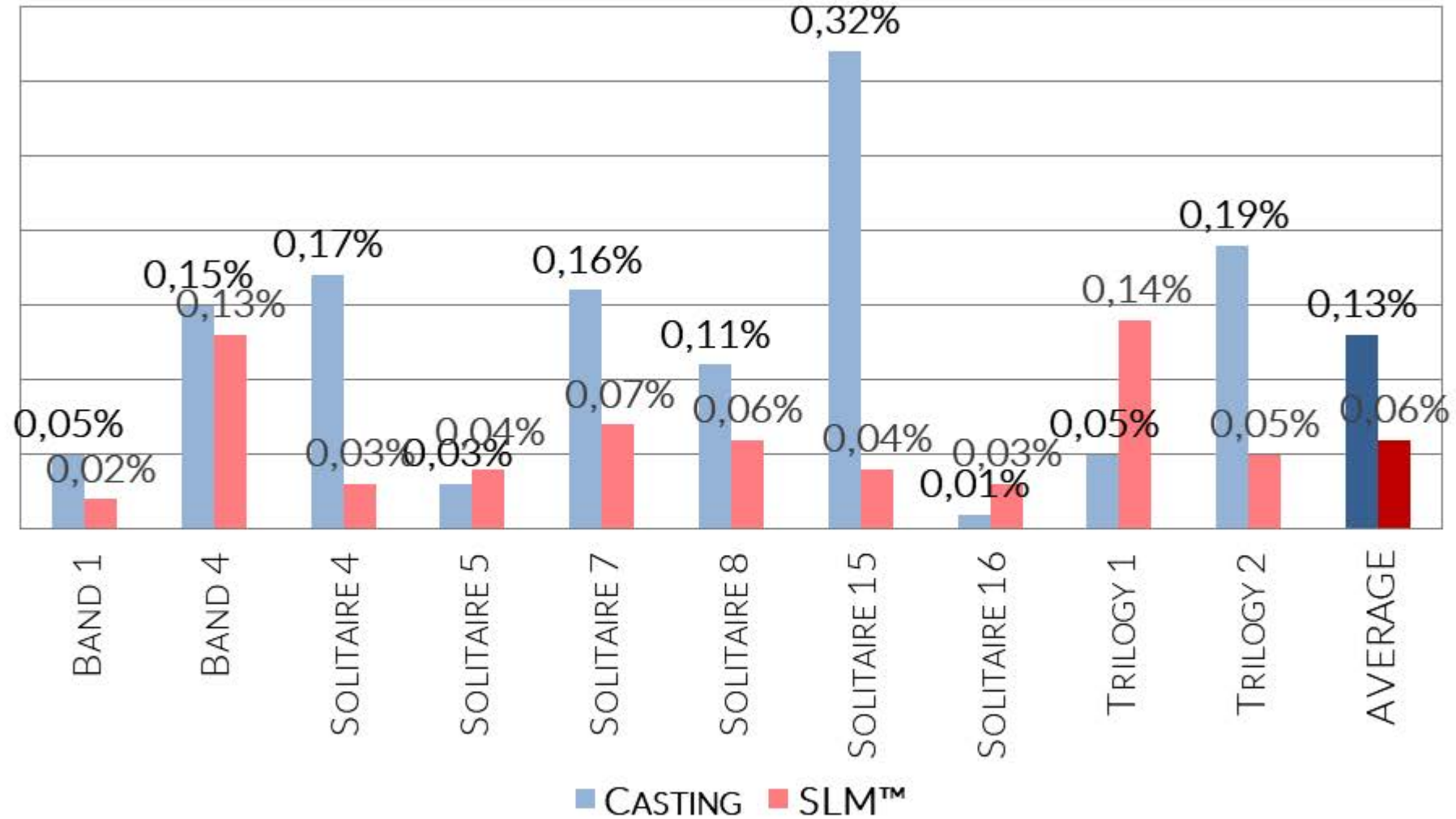
# SURFACE QUALITY

## AVERAGE ROUGHNESS $R_t$ ( $\mu\text{m}$ ) FOR SLM™ AND CAST RINGS



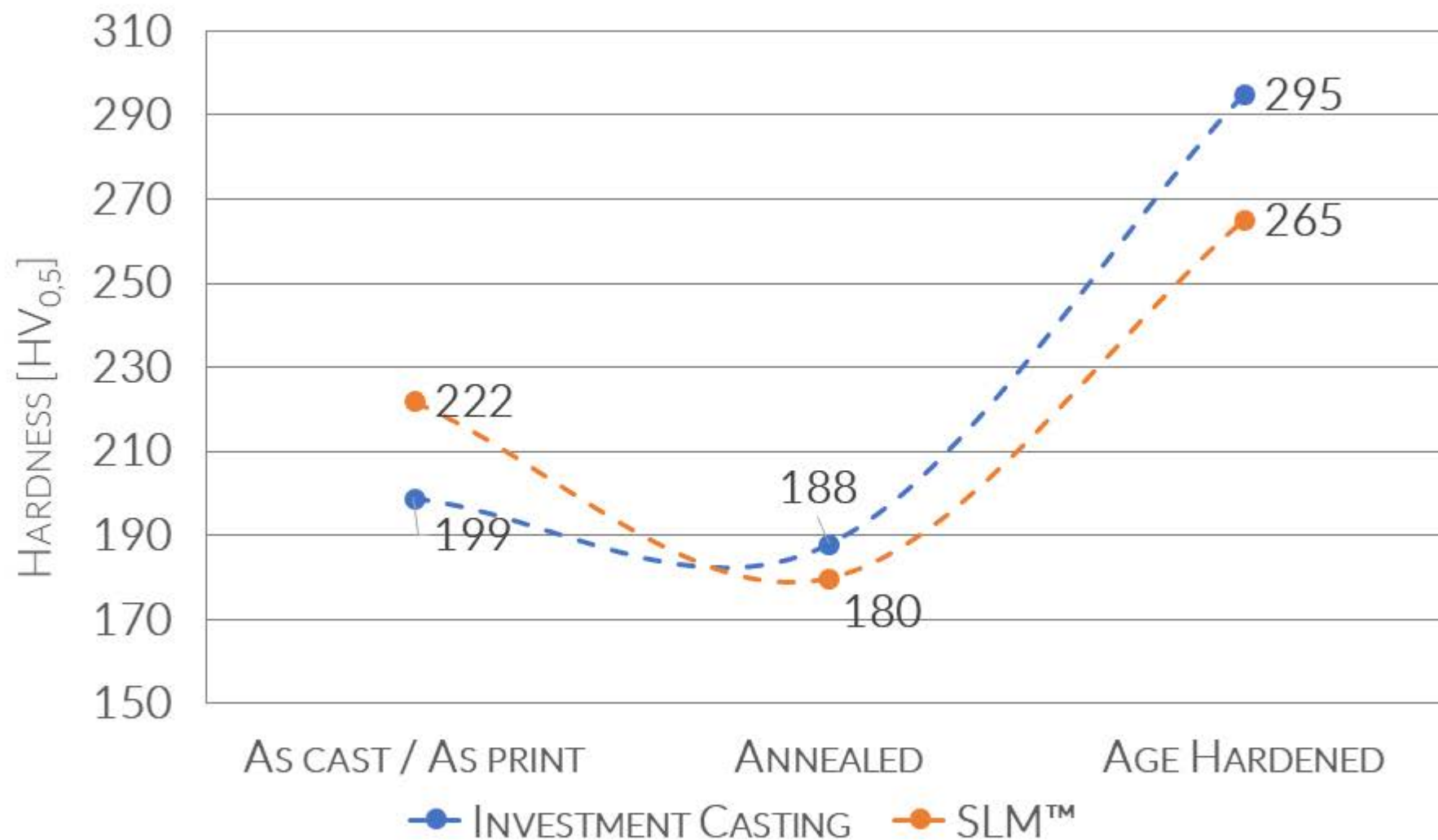
# INTERNAL POROSITY

## AVERAGE RESIDUAL POROSITY



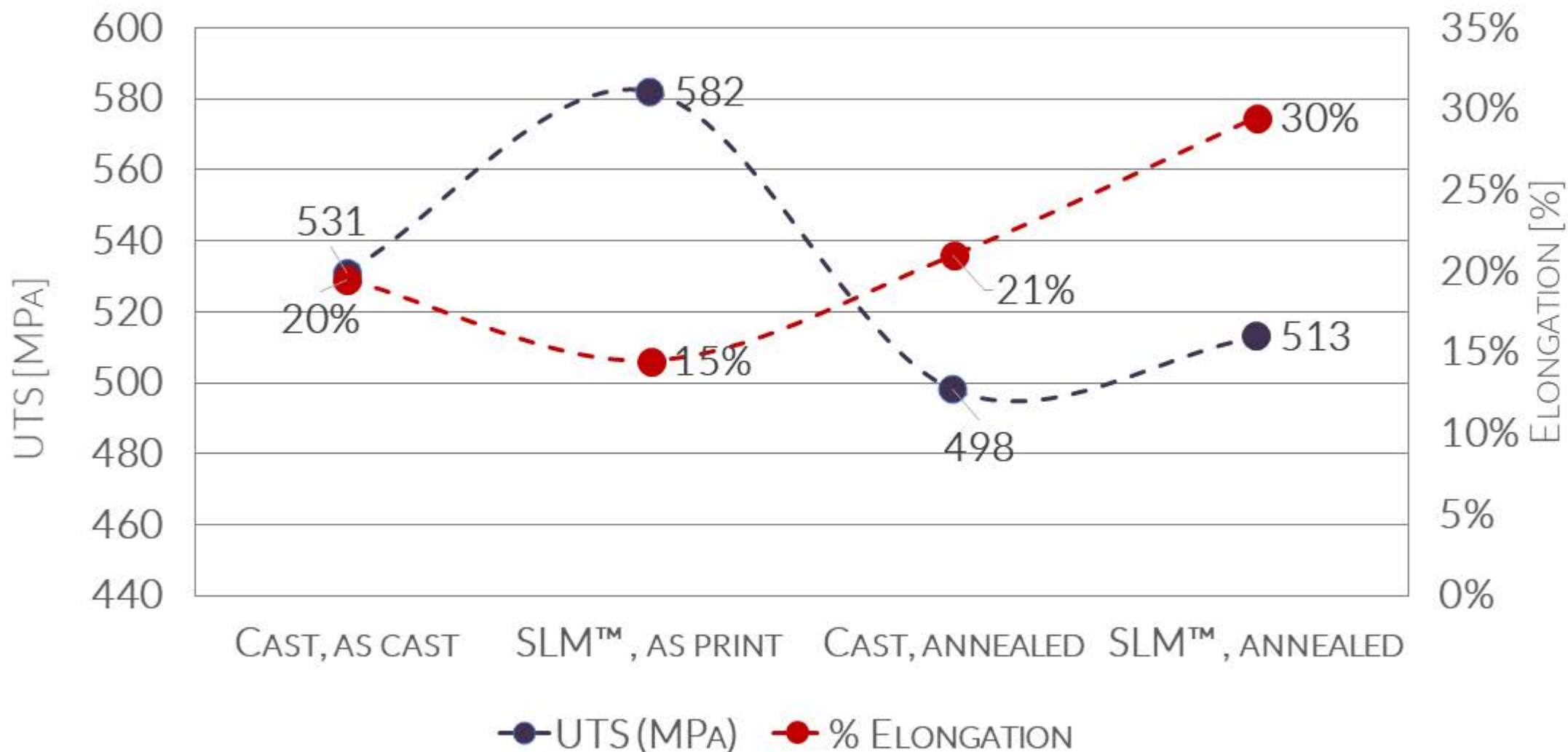
# MECHANICAL CHARACTERISTICS

## HARDNESS



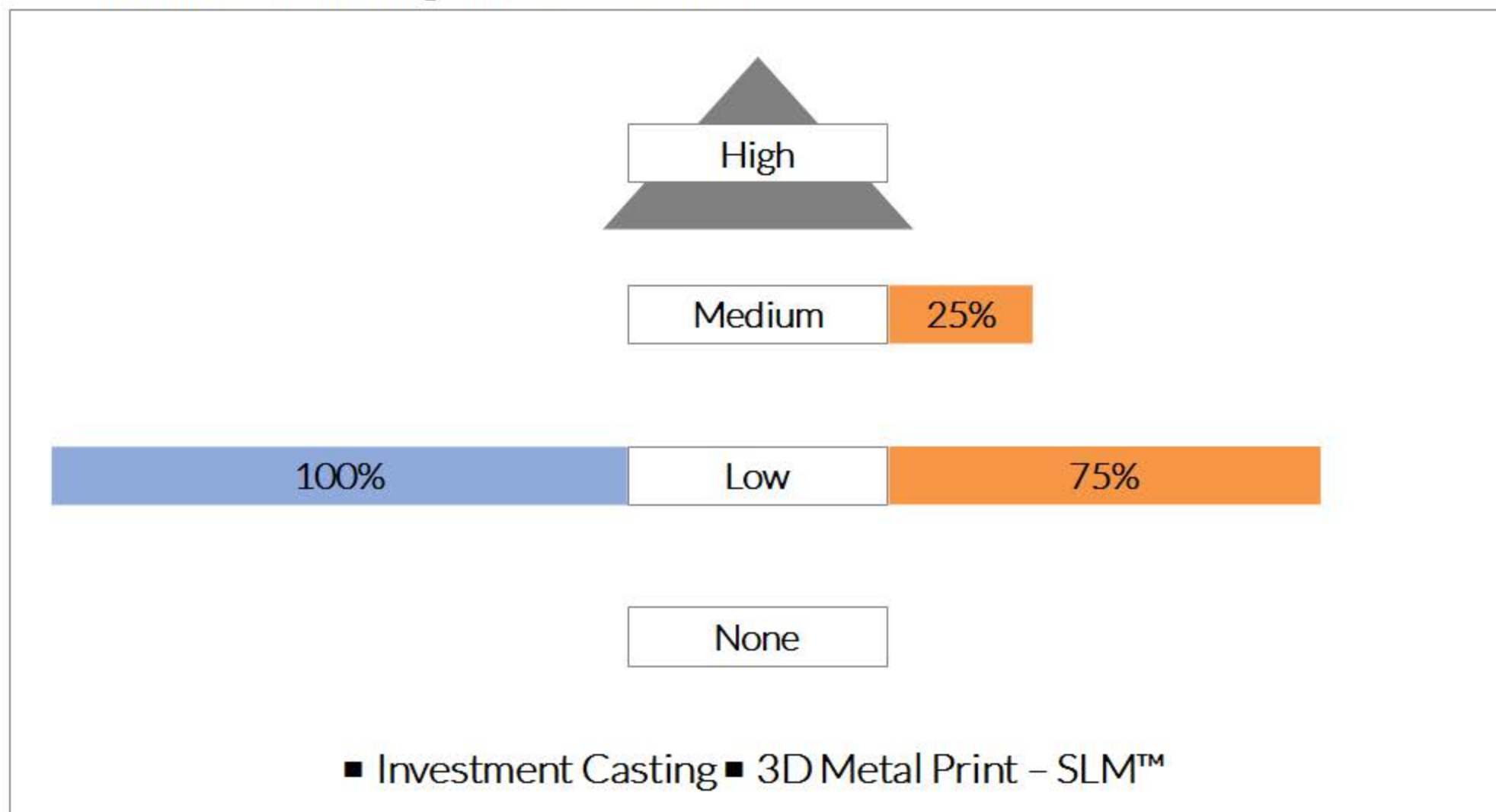
# MECHANICAL CHARACTERISTICS

## UTS & ELONGATION



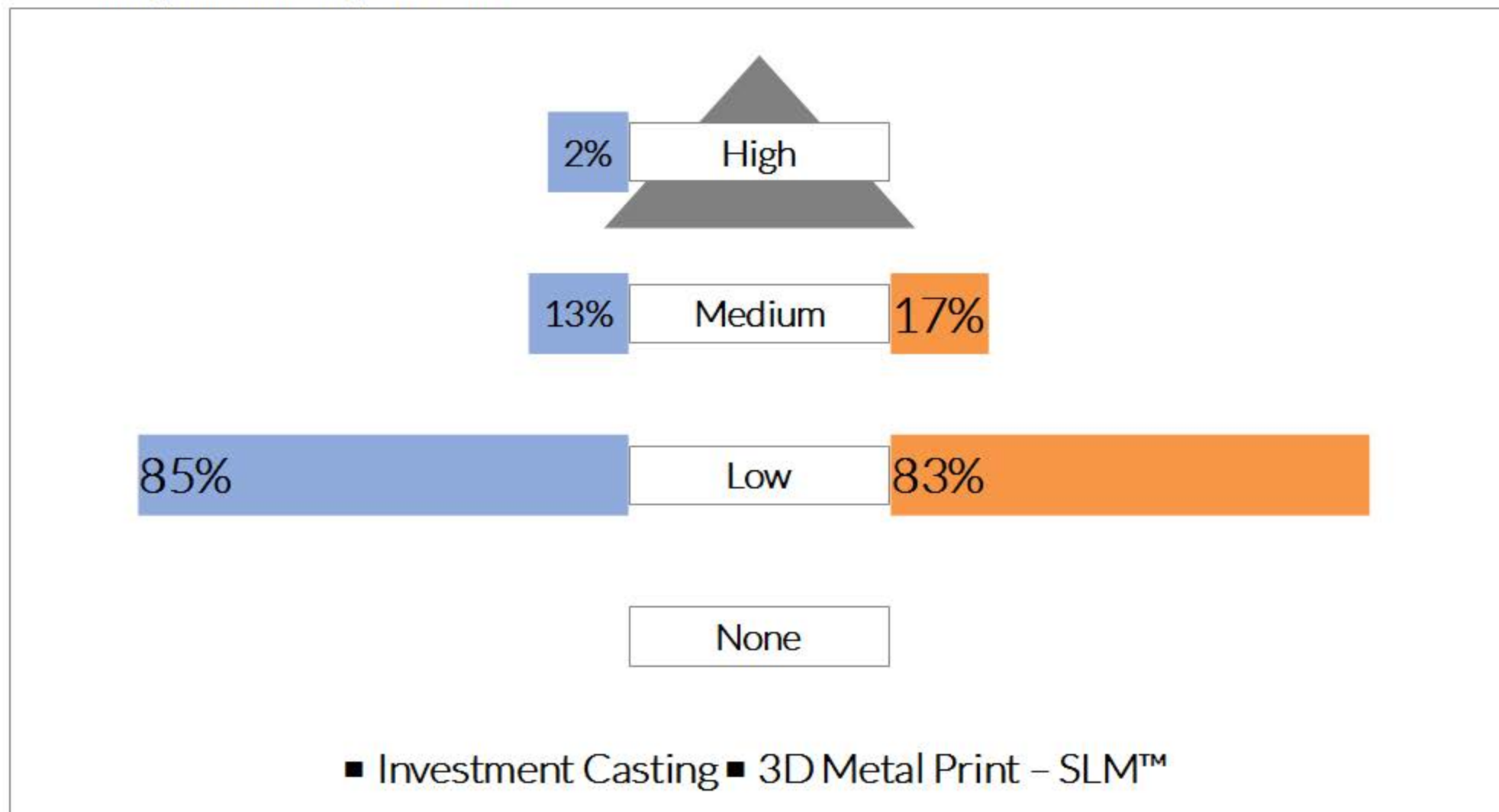
# Filing, Sanding & Polishing

Difficulty on Removing Supports & Feeders



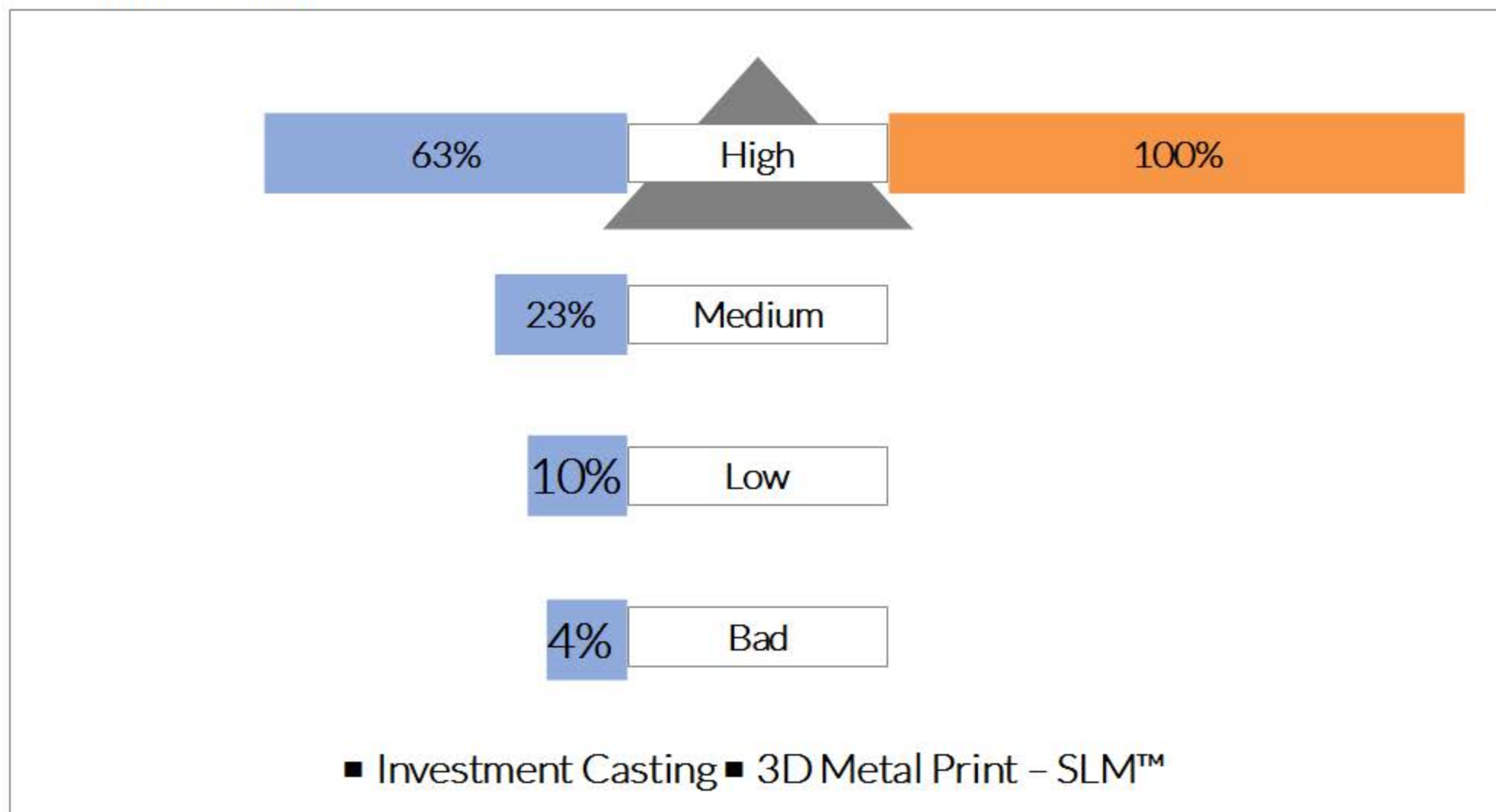
# Filing, Sanding & Polishing

Filing and sanding difficulty



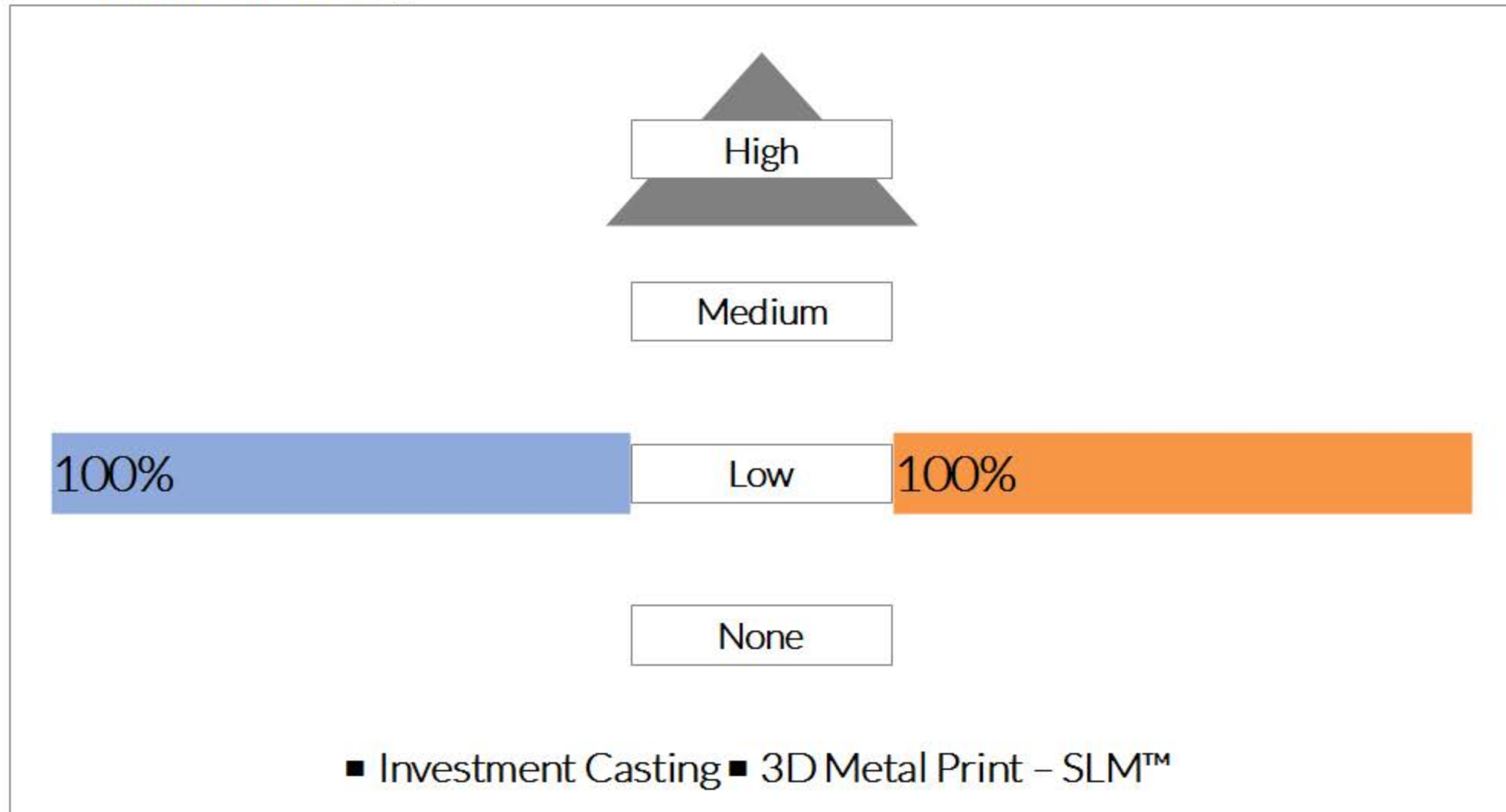
# Filing, Sanding & Polishing

Surface Quality



# Filing, Sanding & Polishing

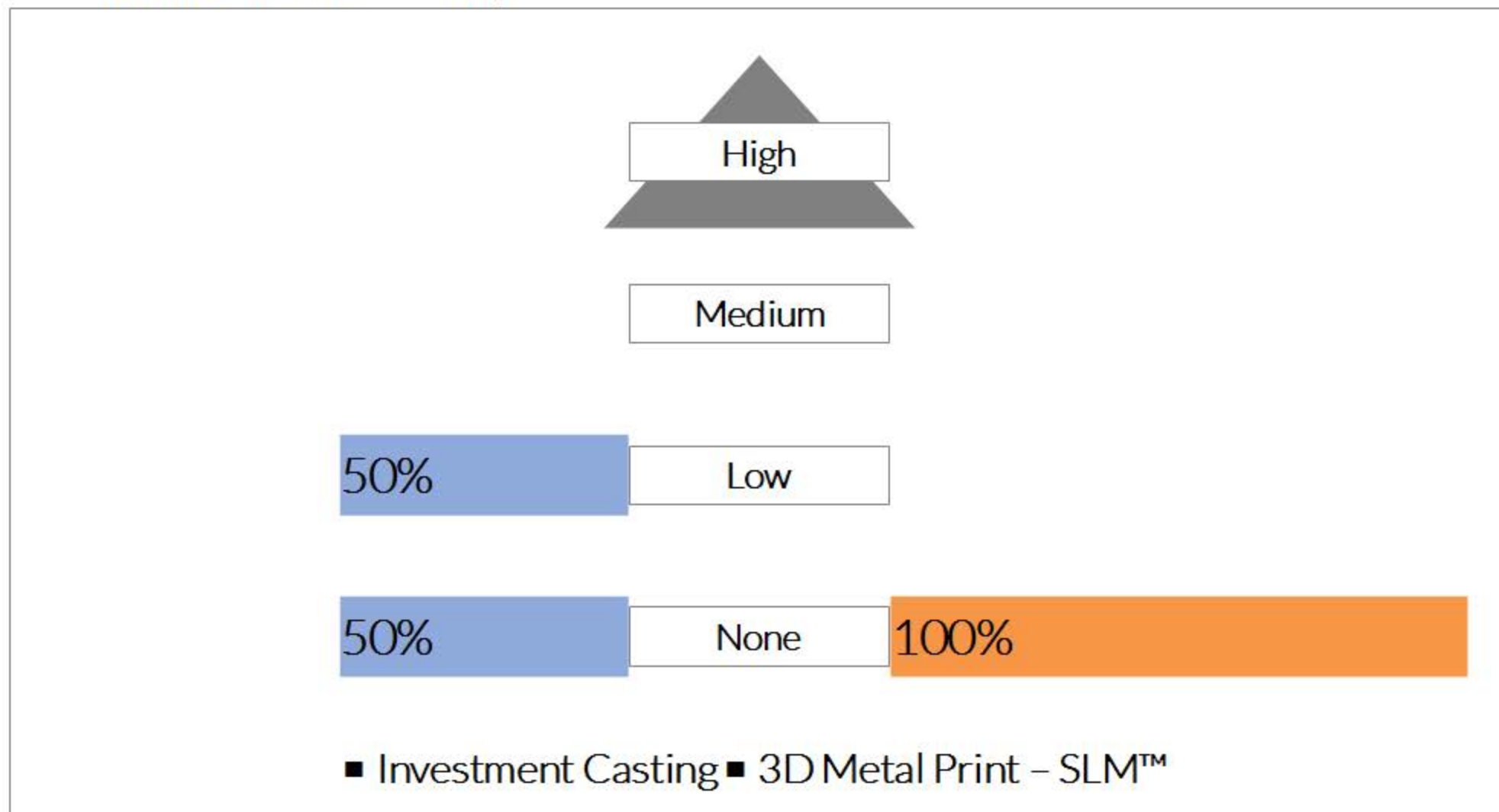
Difficulty in Polishing





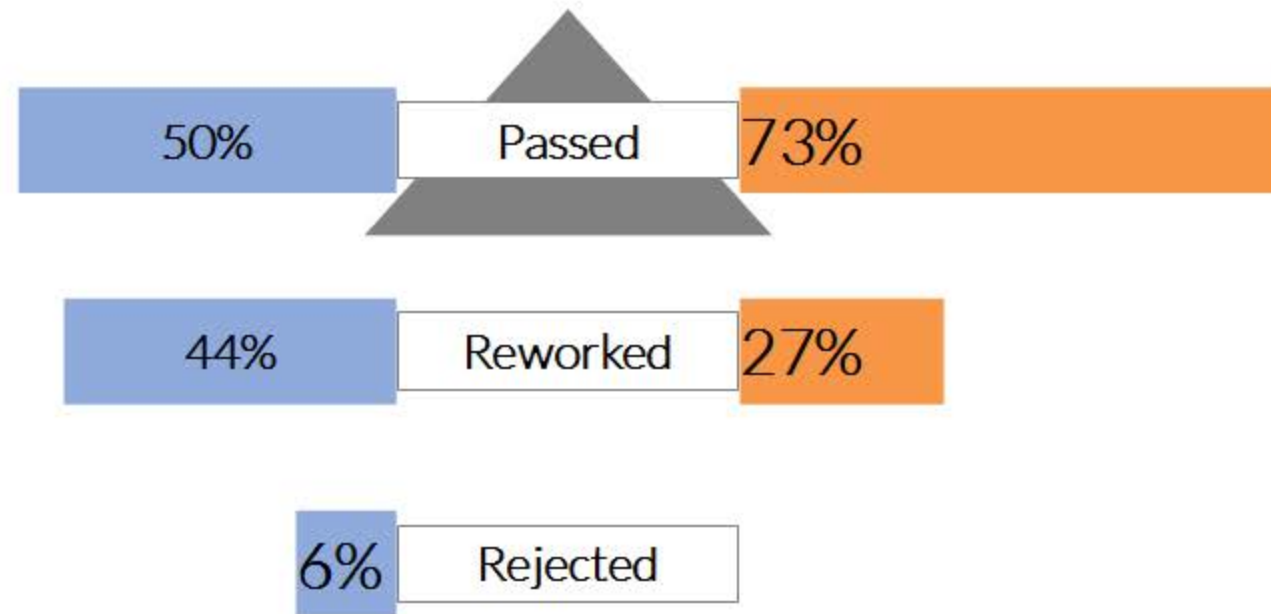
# Filing, Sanding & Polishing

Difficulty in Stones' setting



# Quality Control Evaluation

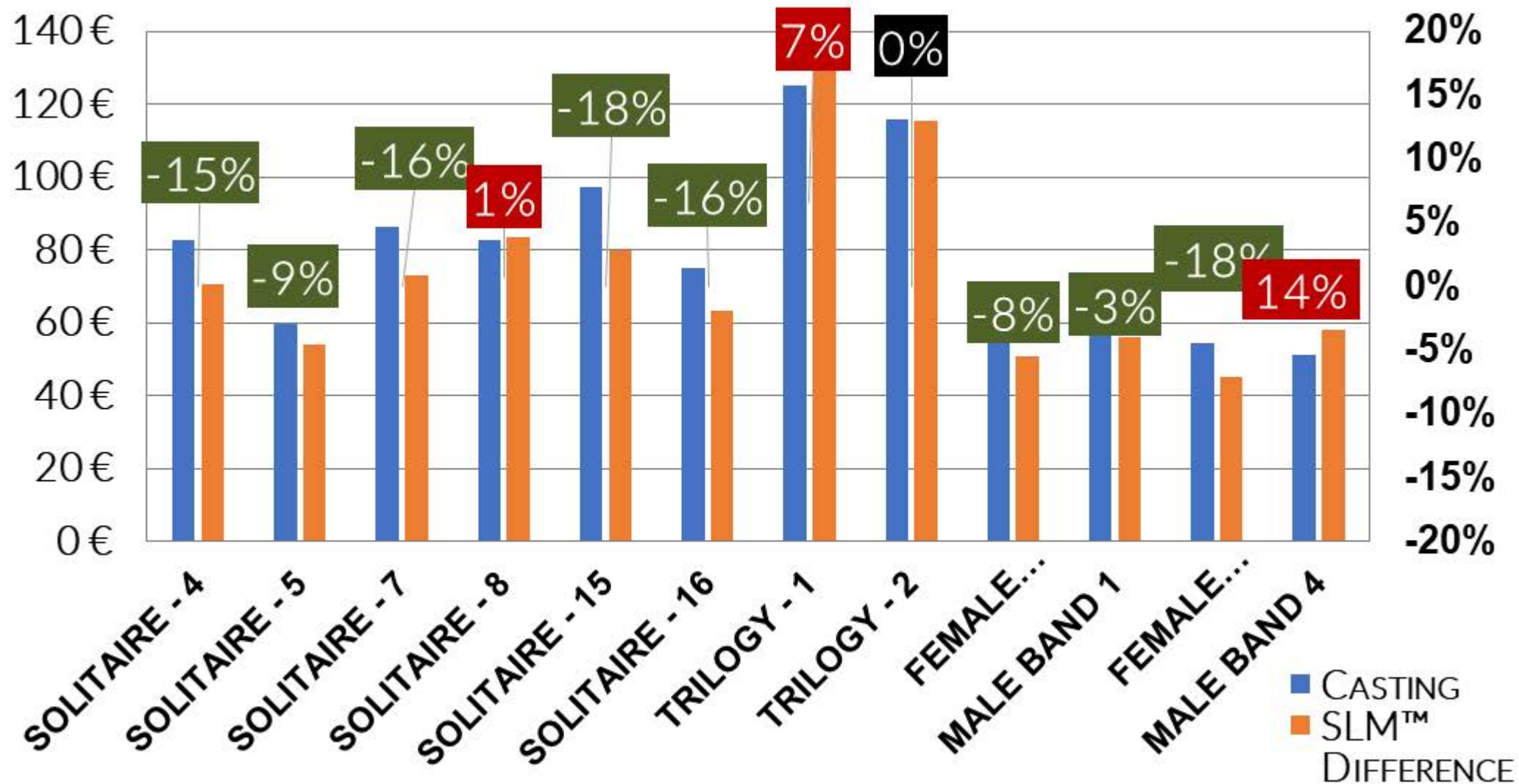
## Quality Scorecard



■ Investment Casting ■ 3D Metal Print – SLM™

# ECONOMICAL AND FINANCIAL EVALUATION

## TOTAL COSTS' OF RINGS



# Economical and Financial Evaluation

## Invested Capital

Resource	Casting	SLM™
Rhinoceros	1.800 €	
Magics Materialise		17.000 €
Wax printer 3D systems Projet MJP	58.500 €	
Tub + mixer	840 €	
Injector Ewing Star	11.500 €	
Mixer st. Louis 2001	13.500 €	
Oven Tibaldi FC-M	9.200 €	
Casting Machine Yasui VCC	68.000 €	
Hydrojet Royaljet	2.000 €	
Oven Carbolite	5.000 €	
Sandblaster	500 €	
MDM 60N-G.M.-H2100		
Printer		
SLM™ 50 Realizer		
Shot peener Comco		
Platinum	26.500 €	75.000 €
Invested Capital	201.340 €	235.000 €

201.340 €

235.000 €