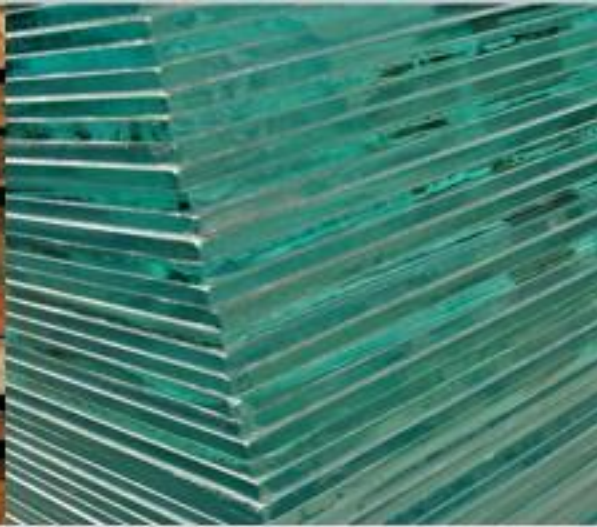




PRD 508 – Pengetahuan Material  
CMF– Colour Material Finish



Woods  
Ceramics



Glass  
Polymers



Metals  
Textiles





# MATERIALS

Quality

Visual identity

Cost

Suitability

Cost



VS



## Visual identity





Bang & Olufsen

Quality





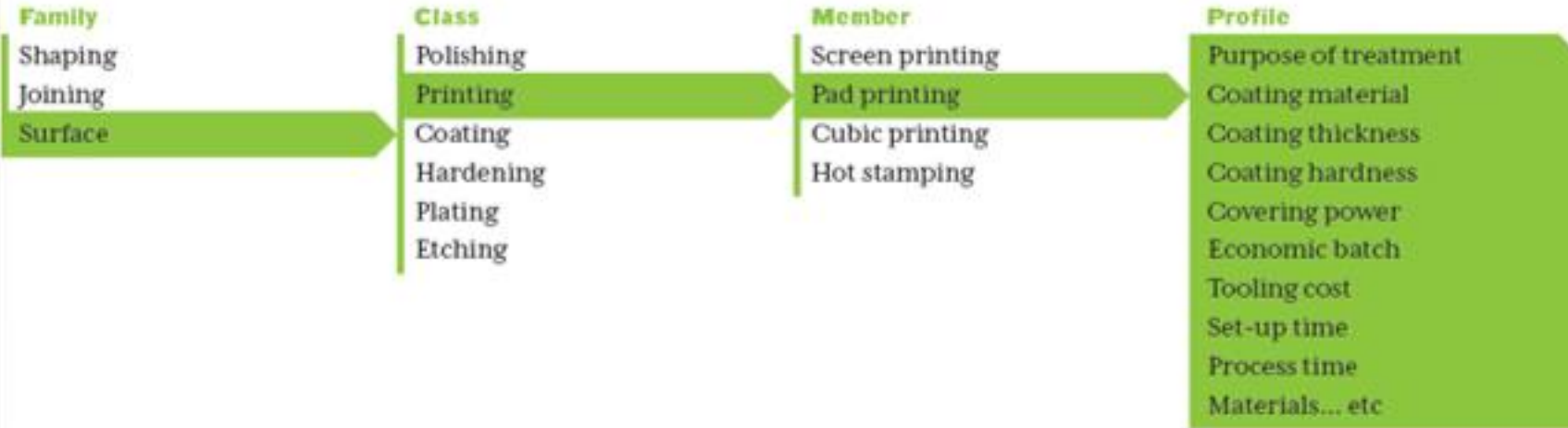


## Suitability



## Material termoplastik dengan output bentuk kompleks





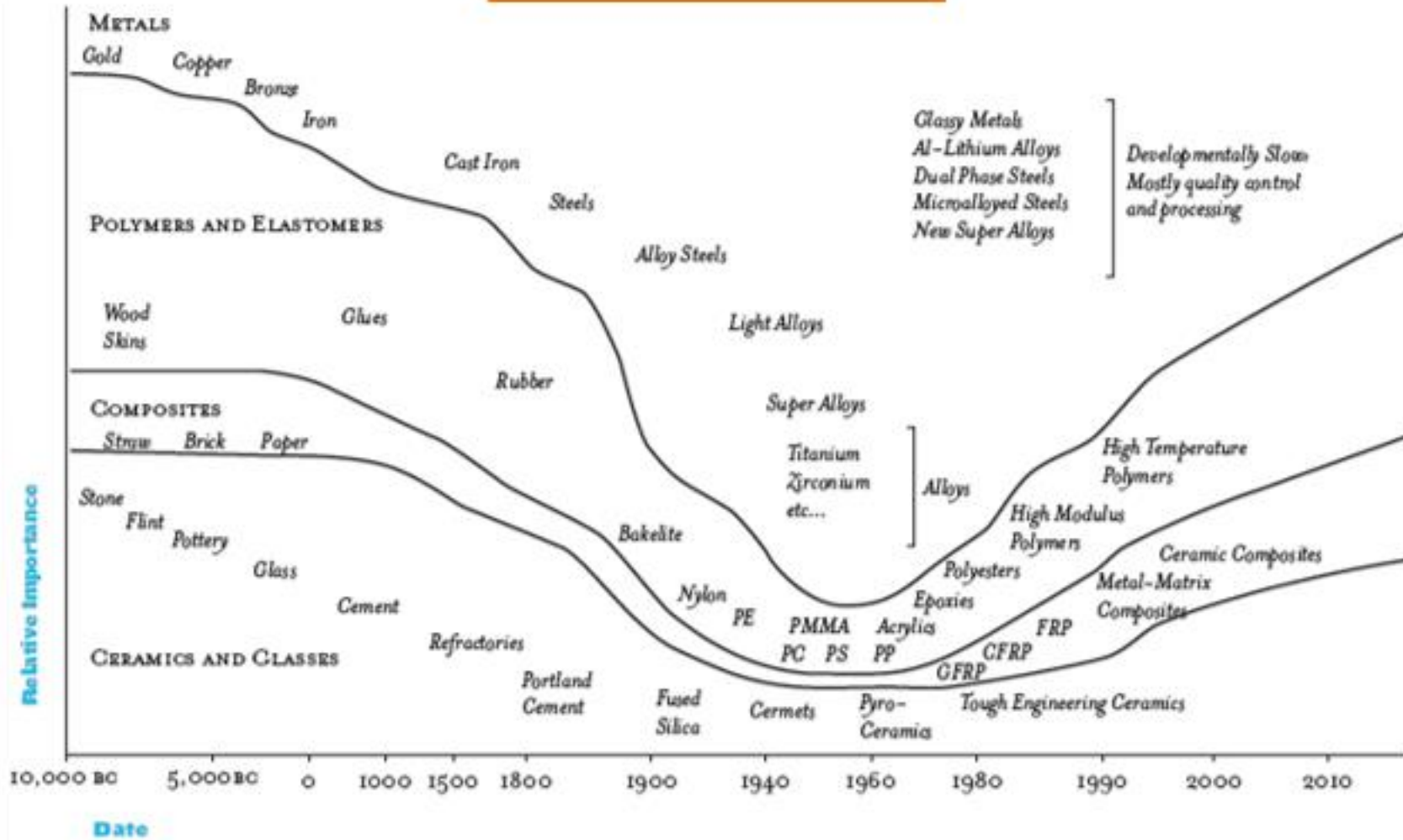
### 5.1 A Classification of Processes

*Based on groupings that are familiar to engineers. The final column shows a list of possible attributes for a specific process. Top, Classification of Shaping Processes; center, Classification of Joining Processes; bottom, Classification of Surface Processes*

Materials are the stuff of design, and throughout history have dictated its opportunities and its limits. The ages in which man has lived are named for the materials he used: stone, bronze, iron, plastics and – today – silicon. But today is not the age of just one material; it is the age of an immense range of materials and the combinations these allow. And people (your customers) are **more aware of issues** related to material selection due to the **emergence of the idea of sustainability**. There has never been **an era in which the evolution of materials was faster** and the sweep of their properties more varied. The menu of **materials has expanded so rapidly** that designers can be forgiven for not knowing that half of them exist. Yet not-to-know is, for the designer, to risk failure: **innovative design, is enabled by the imaginative exploitation of new or improved materials. There is no reason to expect that the pace of material development will slow so things can only get worse** (or better!).

The Evolution of Engineering Materials with Time

Relative importance in the Stone and Bronze Age is based on assessments of archeologists; that in 1960 on allocated teaching hours in UK and US universities; that in 2020 on prediction of material usage in automobiles by manufacturers.



Pottery of dartmoor



Pectoral maskette gold Oaxaca Mexico  
Mixtec-Aztec Culture Late Postclassic Period  
1350-1521 CE



The sword of Tiberius Roman,  
around AD 15 From Mainz



Catapult



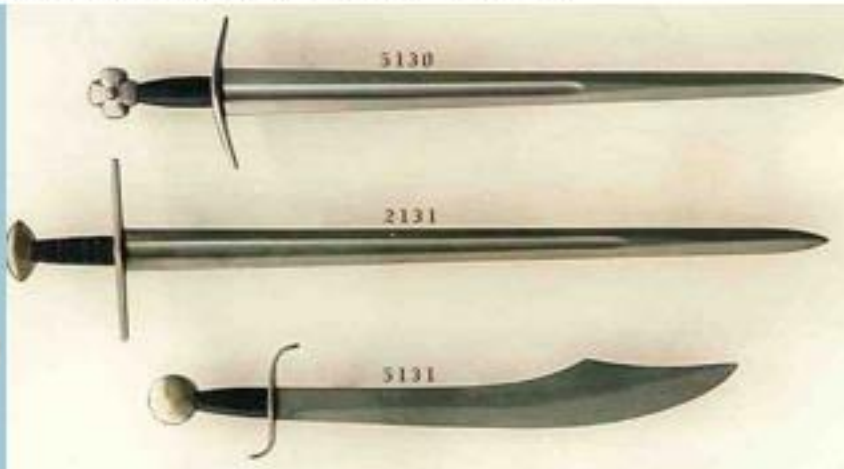
Gold goblet, Mycenaean Greek 1500 BC

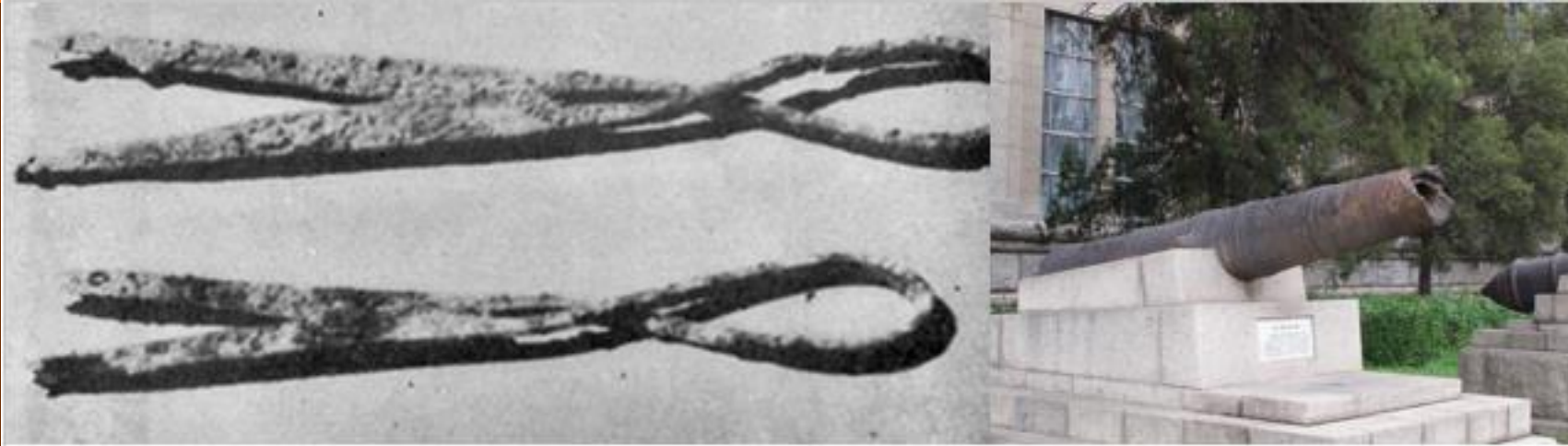


Stone age 4500 BC >



the Bronze Age, 3000 BC to 1000 BC, and the Iron Age, 1000 BC to 1620 AD





Cast iron (1620), development of steel (1850), light alloy (1940)



Engineering materials/metals (1960)





Sekian  
td 12-2020