

# ERED Eletroreductor

## Motivation

There is a clear global trend in the automotive sector towards vehicle electrification, in all segments. That will affect the entire sector supplychain, which shall adapt to that new scenario. Due to several new requirements, the use of an adapted gearbox from a combustion propulsion design shows as significantly lower performance if compared to a customized design.

## Objective

Design a customized automotive gearbox for an electric vehicle, and make a comparison study of different gear manufacturing chains for a given steel alloy.

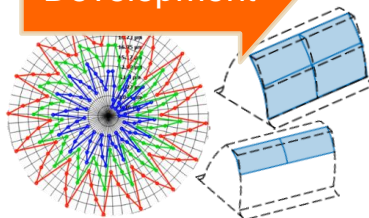
## Approach

Understand the partners needs, the product life cycle and compare different drive architectures using the stakeholders perspectives. Having selected the system concept of operation, narrow down the solution for gears (macro and microgeometry) and other gearbox elements.

Conceptual Design



Gear Development



Bench Testing



Integration & Validation



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