

# Fundamentals of Requirements Engineering

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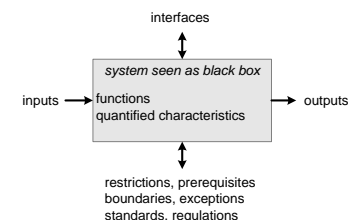
## Abstract

Requirements engineering is one of the systems engineering pillars. In this document we discuss the fundamentals of systems engineering, such as the transformation of needs into specification, the need to prescribe *what* rather than *how*, and the requirements when writing requirements.

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# Definition of “Requirement”

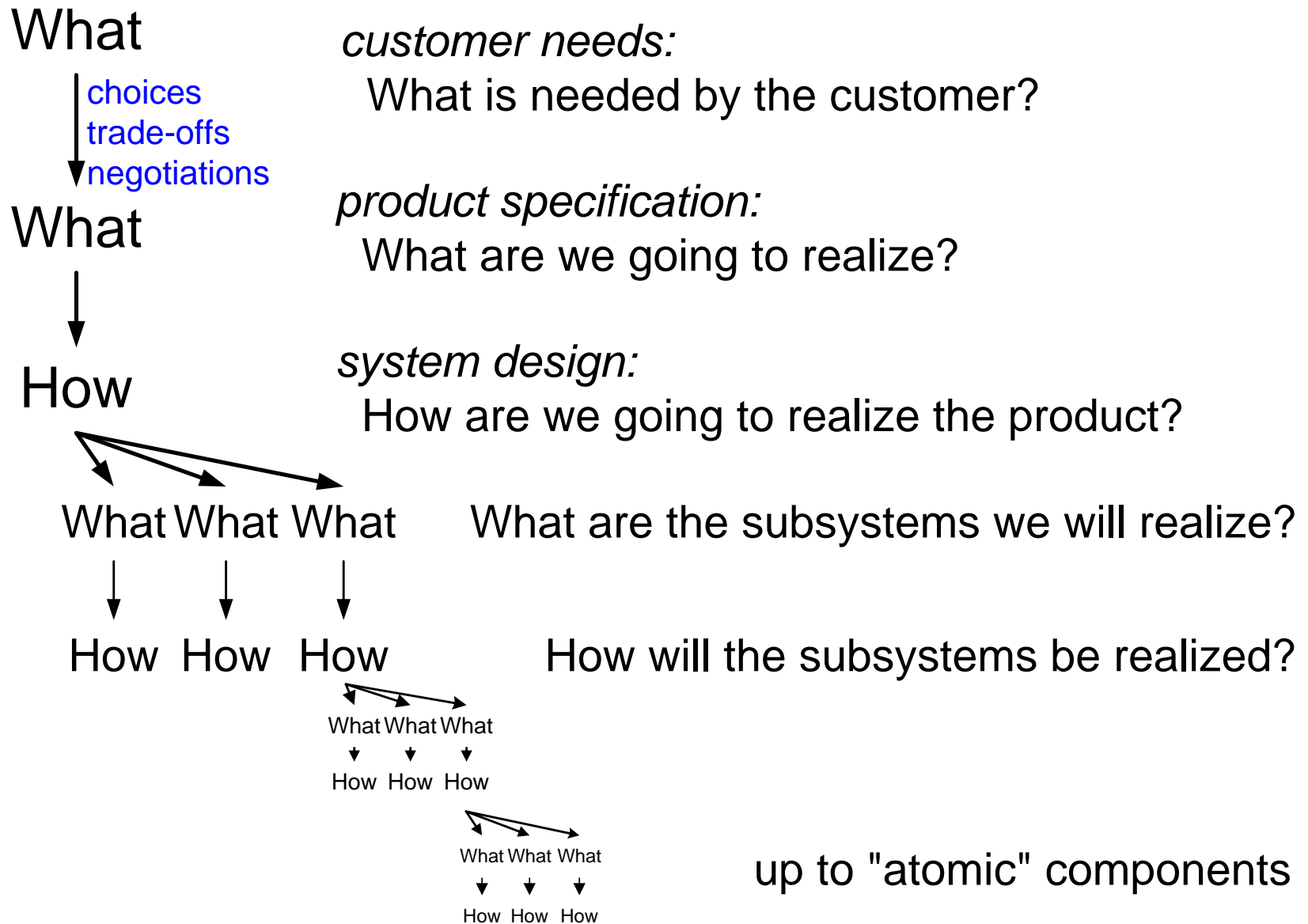
Requirements describing the needs of the customer:  
*Customer Needs*

Requirements describing the characteristics of the final resulting product: *Product Specification*

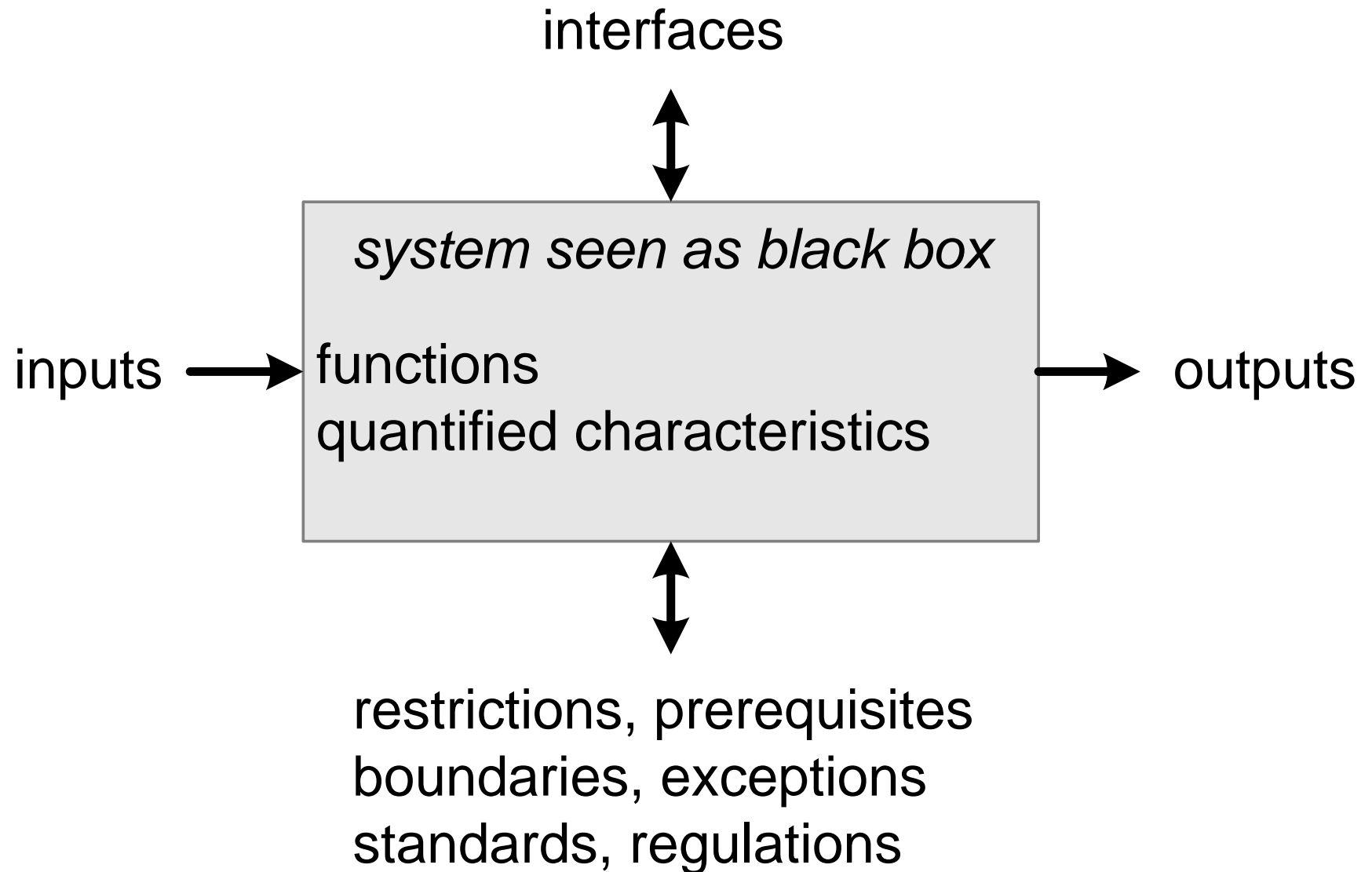
The requirements management process recursively applies definition 2 for every level of decomposition.

Requirements describing the needs of the company itself over the life cycle: *Life Cycle Needs*

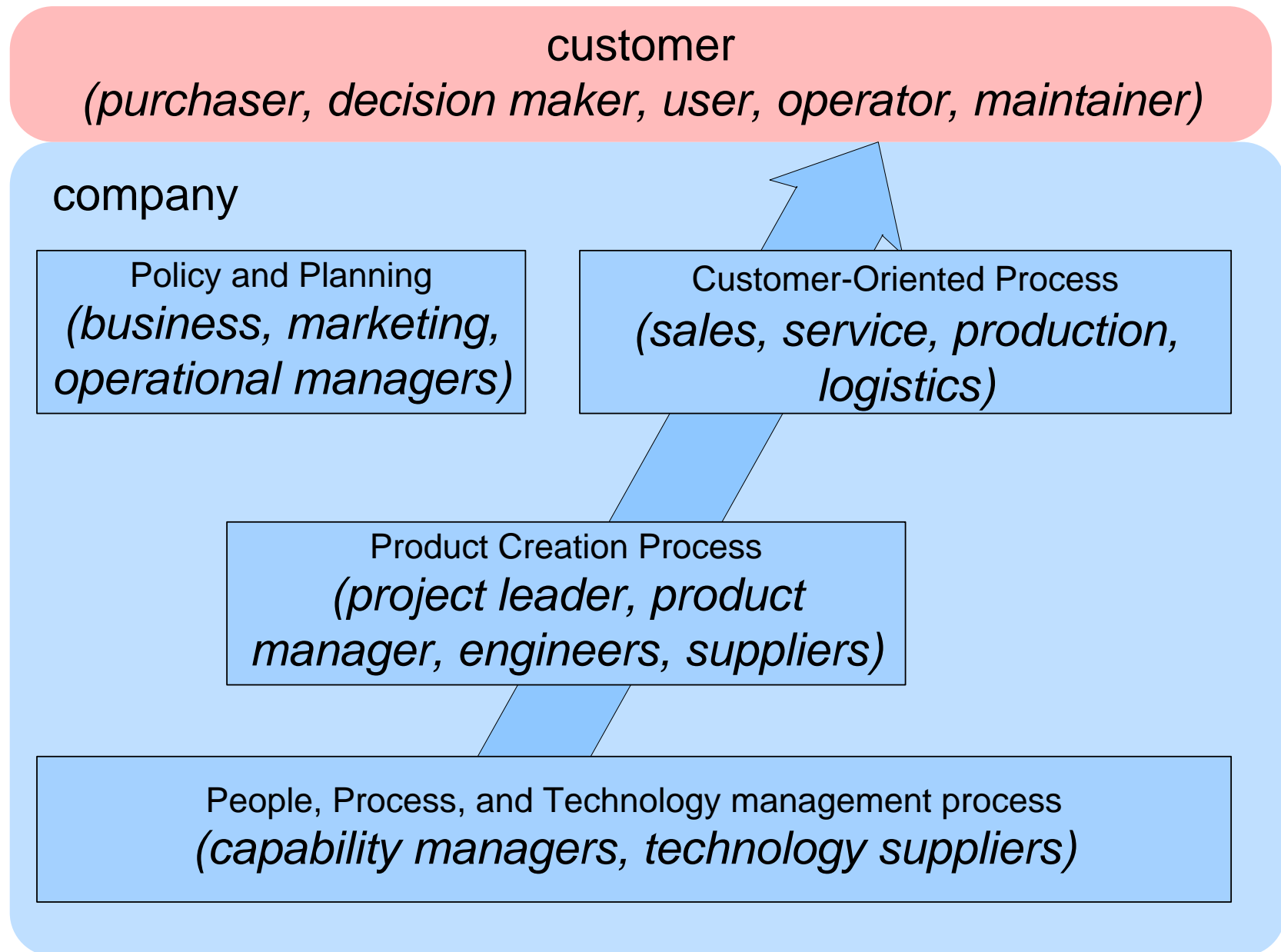
# Flow of Requirements



# System as a Black Box



# Stakeholders w.r.t. Requirements



# The “Formal” Requirements for Requirements

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Specific

Unambiguous

Verifiable

Quantifiable

Measurable

Complete

Traceable

# The Requirements to Enable Human Use

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Accessible

Understandable

Low threshold