

# FUNCTIONAL PERFORMANCE SPECIFICATIONS (FPS)

**Based on EU  
Standard**

**EN 12973:2000**



# What is FPS?



FPS is a document that describes user needs in terms of functional performance without reference to a specific solution.

It specifies the evaluation criteria, levels and tolerance to various functions which are acceptable to the user.

# FPS - ELEMENTS



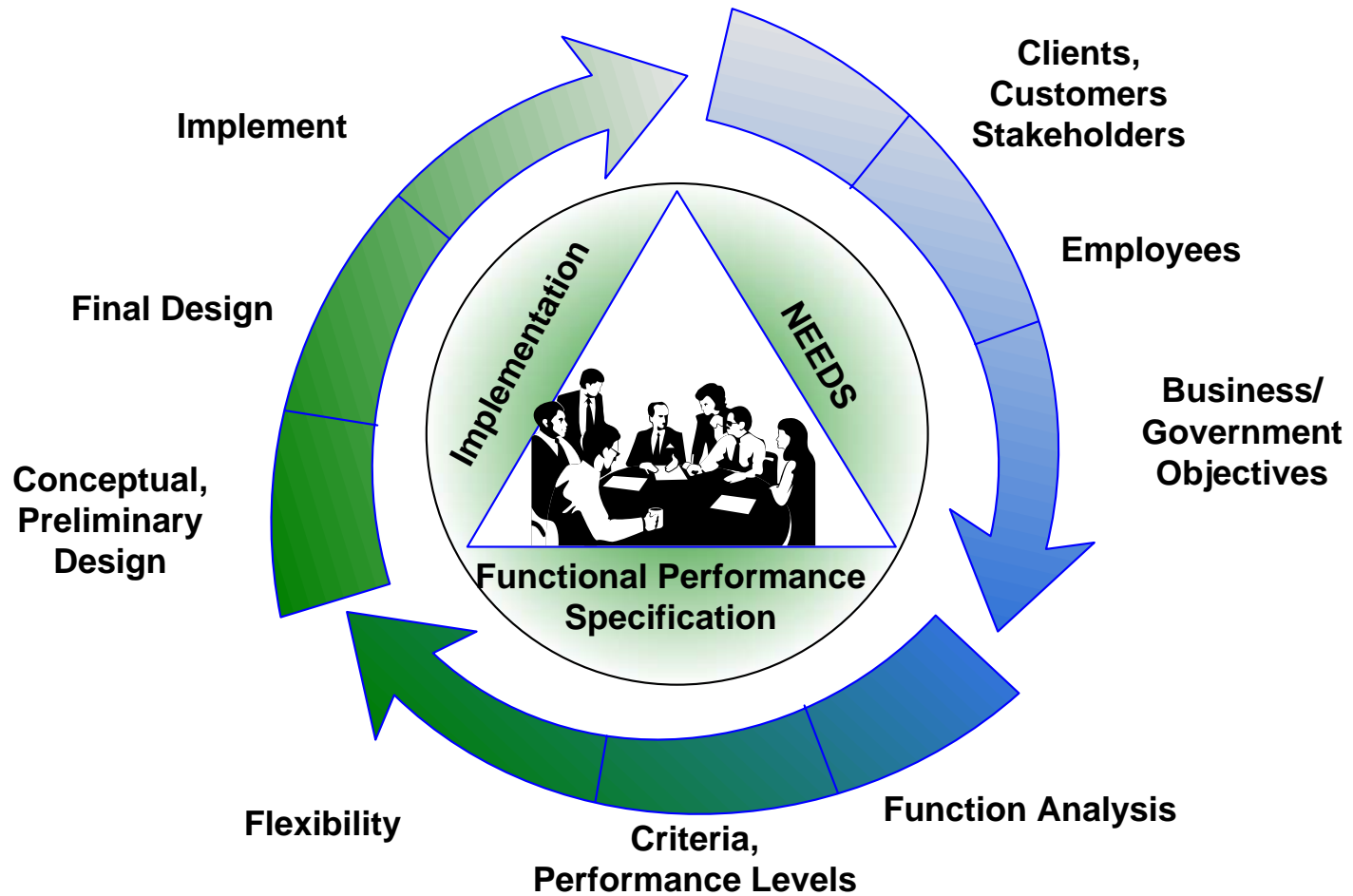
**FUNCTION:** expression of a need (active verb + measurable noun)

**CRITERIA:** criteria that will be used to evaluate and measure if the function is accomplished; generally, there are several criteria per function

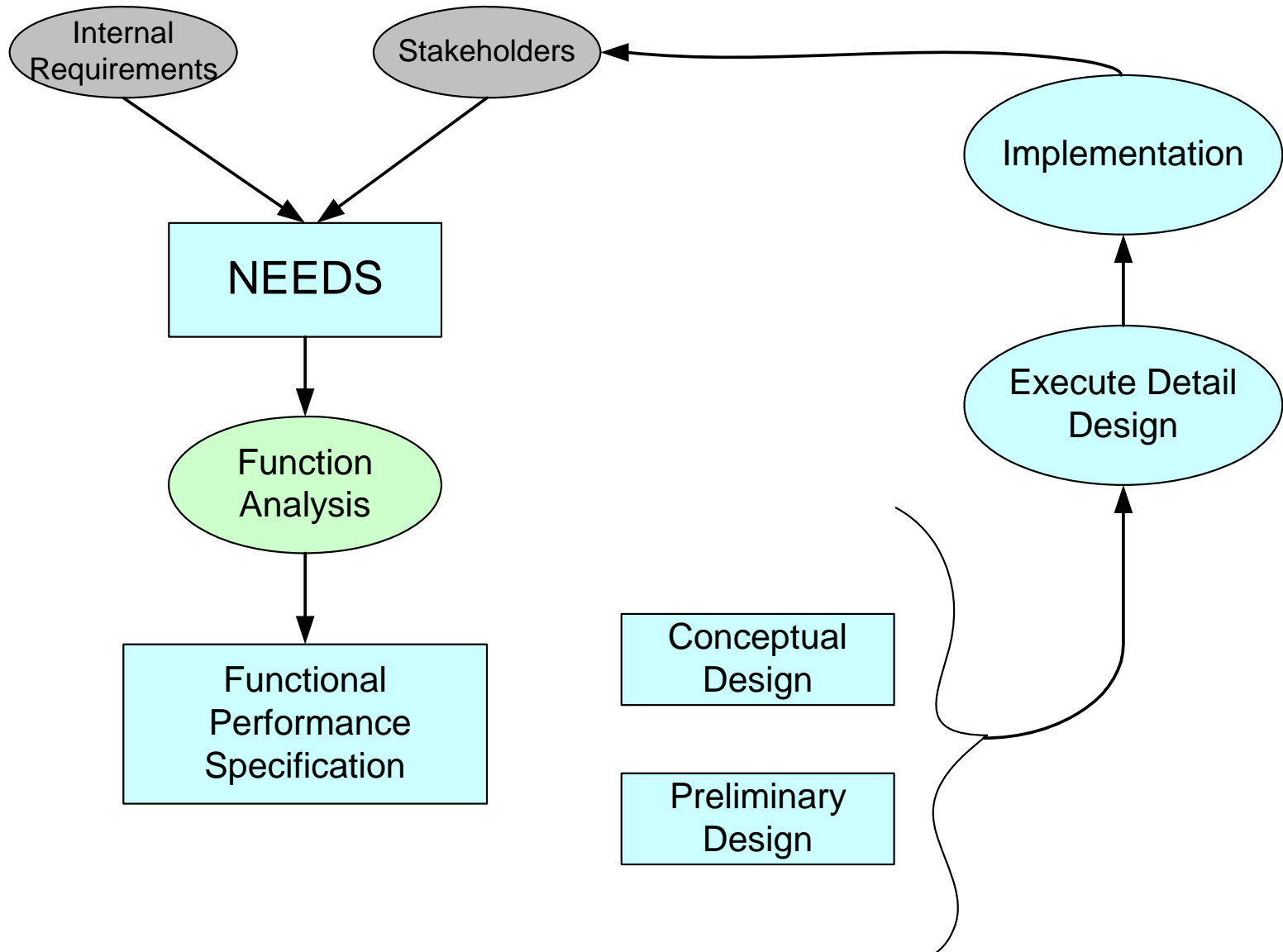
**LEVEL (Tolerance):** range of acceptable results for each functional criterion; can come from an existing performance level, or from an objective to be reached

**FLEXIBILITY:** the negotiability of the function-criteria-level

# FPS Process



# Design Strategy



# FPS - PRINCIPLES



- Describes the need in specific terms
- Indicates any uncertainties or inaccuracies related to the need
- Specifies the constraints (while trying to keep them to a minimum)
- **Gives the designer free rein and responsibility for solutions**
- **Encourages discussion of value optimization between partners**

# Flexibility



The negotiability of the function-criteria-level

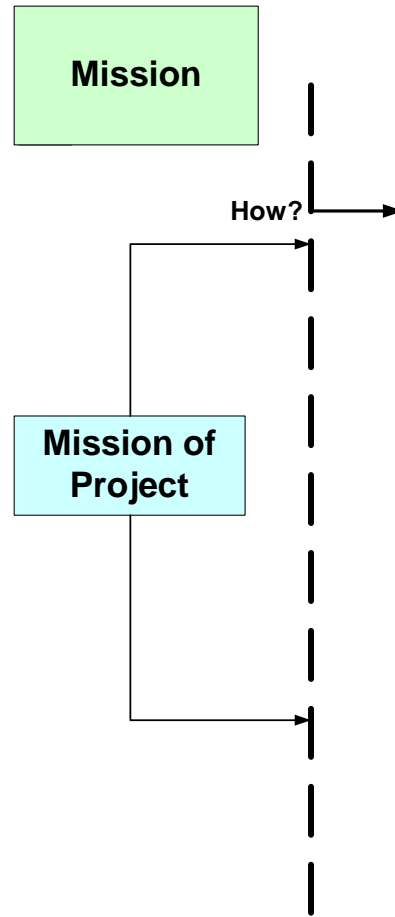
F0 – no flexibility

F1 – minimal flexibility

F2 – some flexibility

F3 – very flexible

# Mission of the Project





# Advantages of FPS



- **Favours**
  - dialogue between business areas and service providers
  - innovation
- **Defines**
  - framework for responding to bids
  - framework for finding solutions
- **Facilitates**
  - preparation of claims



# Finding the Functions



- Intuitive Research (Brainstorming)
- Environmental Analysis
- Sequential Analysis
- Movements and Effort Analysis
- Reference product Analysis (Comparative Study)
- Rules and Regulations Analysis

# Intuitive Research



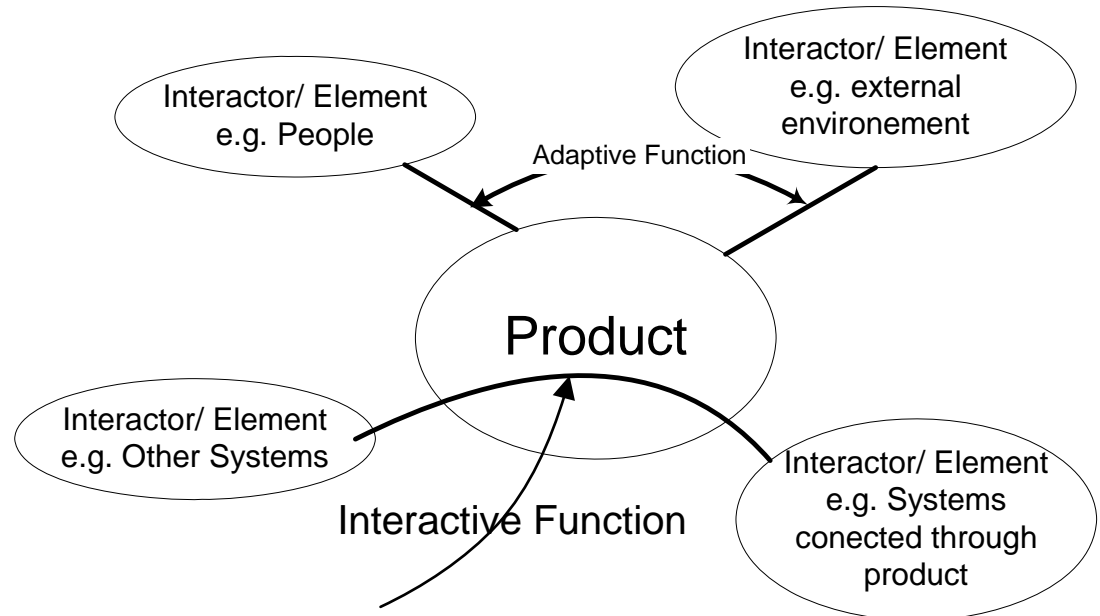
- The Team identifies functions based on individual **and** collective experiences, which are **derived from** knowledge of the problem.



# Environmental Analysis



*In this phase, all elements external to the product that interact with it are identified as its environment; these elements are called interactors or elements.*



# Sequential Analysis



- Functions are found by analyzing the sequence of actions required in the product life cycle.

# Movements and Efforts Analysis



Movements and effort analysis:

Functions are found by analyzing the movements required to accomplish a process and the stresses the product must resist.

# Reference Product Analysis



Similar to Product Benchmarking

- Can involve deconstructing reference products (typically competitive products).
- Determine functions of each component of reference product.

# Summary



FPS is a document that describes user needs in terms of functional performance without reference to a specific solution.

It specifies the evaluation criteria, levels and tolerance to various functions which are acceptable to the user.

FPS helps eliminate surprises

# References



**EN 12973:2000**

**Value Management Practice, Michel Thiry,  
ISBN: 1-880410-14-1**