

E DIN EN 17952:2023-04 (E)

Erscheinungsdatum: 2023-02-24

Value management - Function analysis, basic characteristics: Requirements and guidance for implementation and achieving deliverables; English version prEN 17952:2023

Contents

Page

European foreword	4
0 Introduction.....	5
0.1 General.....	5
0.2 Function Analysis at the heart of Management.....	5
0.3 Contributions for the different users of the standard	5
0.4 Key roles and responsibilities.....	6
0.5 Function Analysis with its two application areas.....	6
0.6 Conditions for success.....	7
0.7 Function Thinking	8
1 Scope.....	9
2 Normative references.....	10
3 Terms and definitions	10
4 Function Analysis overview	13
4.1 Context for Function Analysis	13
4.2 Function Analysis: a “system” approach.....	14
4.3 Function Analysis with its two areas	15
4.3.1 Functional Need Analysis.....	18
4.3.2 Technical Function Analysis	19
4.4 Roles and contributions of the involved actors	20
4.5 Function Thinking	21
5 Application of Function Analysis.....	21
5.1 General.....	21
5.2 Top Management level of the organization: Vision and Strategic)	22
5.3 Management level.....	22
5.4 Operational level.....	22
5.5 Day to Day Management.....	23
5.6 Risk management and Dependability	23
5.7 Sourcing and Procurement.....	23
5.8 Systems Engineering.....	24
5.9 Innovation management	24
6 Requirements for effective application of Function Analysis.....	25
6.1 General.....	25
6.2 Scope study.....	25
6.3 Identify functions and constraints.....	26
6.4 Organize the functions	28
6.5 Characterize the functions.....	28
6.6 Prioritizing/Weighting the functions	29
6.7 Estimating efficiency of provided services	29
7 Requirements applicable to Function Analysis deliverables.....	29
7.1 Requirements applicable to Functional Need Analysis (FNA) deliverables.....	29

7.1.1	Study Scope	30
7.1.2	Global need.....	30
7.1.3	Inventory of the functions	31
7.1.4	Characterization of the Functions	34
7.1.5	Use of Function Analysis	35
7.2	Requirements applicable to Technical Function Analysis (TFA) deliverables	35
7.2.1	General	35
7.2.2	Expected contributions	36
7.2.3	Study Scope	36
7.2.4	Need to be covered by the product.....	36
7.2.5	State and modes aspects	37
7.2.6	Description of the functions and constraints	37
7.2.7	Interfaces.....	37
7.2.8	Product Related Functions.....	38
7.2.9	Characterization of the product related functions.....	39
7.2.10	Solution architecture.....	40
7.2.11	Validation of solutions.....	40
7.2.12	Use of Function Analysis	42
Annex A	(informative) Guidance applicable to the approach and methods of Function Analysis	43
A.1	Recommendations.....	43
A.2	Main techniques of Function Analysis.....	43
A.2.1	Natural or intuitive search	43
A.2.2	Interaction with external environment.....	44
A.2.3	Function Analysis System Technique (FAST).....	46
A.2.4	Function Tree	48
A.2.5	Function Cost.....	50
Annex B	(informative) Guidance applicable to the approach and methods of Function Analysis	52
Bibliography		59