

DIN EN 16603-10:2018-07 (E)

Space engineering - System engineering general requirements; English version EN 16603-10:2018

Inhalt	Seite
European Foreword	5
1 Scope	7
2 Normative references	9
3 Terms, definitions and abbreviated terms	10
3.1 Terms from other standards.....	10
3.2 Terms specific to the present standard	10
3.3 Abbreviated terms.....	11
4 Overview of system engineering	14
4.1 The system engineering discipline	14
4.2 The system engineering process	18
4.3 Overview of system engineering tasks per project phase.....	19
4.3.1 Overview.....	19
4.3.2 General	19
4.3.3 Phase 0 Overview: Mission analysis-need identification.....	20
4.3.4 Phase A Overview: Feasibility.....	20
4.3.5 Phase B Overview: Preliminary definition.....	20
4.3.6 Phase C Overview: Detailed definition	21
4.3.7 Phase D Overview : Qualification and production.....	21
4.3.8 Phase E Overview: Operations / utilization.....	21
4.3.9 Phase F Overview: Disposal	21
5 General requirements	23
5.1 System engineering plan	23
5.2 Requirement engineering.....	24
5.2.1 General	24
5.2.2 Requirement traceability.....	24
5.2.3 Requirement engineering process.....	25
5.3 Analysis.....	27
5.3.1 System analysis	27
5.3.2 System environments and design and test factors	28

5.3.3	Trade-off analyses	28
5.3.4	Analysis methods, tools and models	29
5.4	Design and configuration	30
5.4.1	Design.....	30
5.4.2	Configuration.....	31
5.5	Verification.....	32
5.5.1	General.....	32
5.5.2	Product verification.....	32
5.6	System engineering integration and control	33
5.6.1	Management of system engineering activities	33
5.6.2	Planning.....	33
5.6.3	Engineering data	33
5.6.4	Interface control	34
5.6.5	Coordinate systems and units	34
5.6.6	Technical budgets and margin policy	34
5.6.7	Technology	34
5.6.8	Risk management	35
5.6.9	Changes and nonconformances control	35
6	<<deleted and added with modifications as new clause 4.3>>	36
7	Pre-tailoring matrix per space product types	37
Annex A	(informative) System engineering documents delivery per review	51
Annex B	(normative) Mission description document (MDD) – DRD.....	55
Annex C	(normative) System concept report – DRD	59
Annex D	(normative) System engineering plan (SEP) – DRD	60
Annex E	(normative) Technology plan (TP) – DRD.....	69
Annex F	(normative) Technology matrix - DRD	73
Annex G	(normative) Design definition file (DDF) - DRD.....	75
Annex H	(normative) Function tree - DRD	80
Annex I	(normative) Technical budget - DRD.....	82
Annex J	(normative) Specification tree - DRD	84
Annex K	(normative) Design justification file (DJF) - DRD	86
Annex L	(normative) Trade-off report - DRD	93

Annex M (normative) <<deleted>>	96
Annex N (normative) Requirements traceability matrix (RTM) - DRD	97
Annex O (normative) Requirements justification file (RJF) - DRD	99
Annex P (normative) Product user manual (PUM or UM) - DRD	102
Annex Q <<deleted and replaced by informative Annex S>>	110
Annex R (informative) Mapping of typical DDP to ECSS documents	111
Annex S (informative) Guideline content of Analysis Report	113
Bibliography	115

Figures

Figure 4-1: System engineering, sub-functions and boundaries	16
Figure 4-2: System engineering sub-functions inter-relationships	17
Figure B-1 : Relationship between documents	56
Figure E-1 : TRSL template	72

Tables

Table A-1 : System engineering deliverable documents	52
--	----