

ISO 16355-1:2015-12 (E)

Application of statistical and related methods to new technology and product development processes - Part 1: General principles and perspectives of Quality Function Deployment (QFD)

Contents	Page
Foreword	vi
Introduction	vii
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Basic concepts of QFD	3
4.1 Theory and principles of QFD	3
4.2 QFD use of the word of function	3
4.3 Spirit of QFD	3
4.4 Display of information	4
5 Integration of QFD and product development methods	4
5.1 QFD support for product development methods	4
5.2 Flow of product development with QFD	4
5.2.1 Organization of the QFD flow	4
5.2.2 Flow chart of product development with QFD	5
6 Types of QFD projects	5
6.1 General	5
6.2 Applicable methods and tools	6
7 QFD team membership	6
7.1 QFD uses cross-functional teams	6
7.2 Core team membership	6
7.3 Subject matter experts	6
7.4 QFD team leadership	7
8 QFD voices	7
8.1 Voice of business	7
8.2 Voice of customer (VOC) or voice of stakeholder (VOS)	8
8.2.1 Definition of customer or stakeholder	8
8.2.2 Applicable methods and tools	8
8.2.3 Marketing perspective and engineering perspective	8
8.2.4 Applicable methods and tools	8
8.2.5 Prioritize customers or stakeholders	8
8.2.6 Applicable methods and tools	9
8.2.7 What is contained in the voice of customer (VOC) or voice of stakeholder (VOS)	9
8.2.8 Sources of VOC and VOS	9
8.2.9 Applicable methods and tools	9
8.2.10 Translating VOC/VOS into customer needs	10
8.2.11 Applicable methods and tools	10
9 Structuring information sets	10
9.1 General	10

9.2	Applicable tools and methods	10
10	Prioritization	11
10.1	General	11
10.2	Applicable tools and methods	11
11	Quantification	11
11.1	General	11
11.2	Applicable tools and methods	11
12	Translation of one information set into another	12
12.1	General	12
12.2	Applicable tools and methods	12
13	Transfer of prioritization and quantification from one information set into another	12
13.1	Transfer of prioritization	12
13.2	Applicable tools and methods	13
13.3	Transfer of quantification	13
13.4	Applicable tools and methods	13
13.5	Transferring deployment sets by dimensions	13
13.5.1	General	13
13.5.2	Quality deployment	14
13.5.3	Applicable tools and methods	14
13.5.4	Technology deployment	14
13.5.5	Applicable tools and methods	15
13.5.6	Cost deployment	15
13.5.7	Applicable tools and methods	15
13.5.8	Reliability deployment	15
13.5.9	Applicable tools and methods	15
13.5.10	Safety deployment	16
13.5.11	Security deployment	16
13.5.12	Lifestyle and emotional quality deployment	16
13.5.13	Applicable tools and methods	16
13.6	Transferring deployment sets by levels	16
13.6.1	Function deployment	16
13.6.2	Applicable tools and methods	16
13.6.3	Parts deployment	17
13.6.4	Applicable tools and methods	17
13.6.5	Manufacturing and process deployments	17
13.6.6	Applicable tools and methods	17
13.6.7	Project work or task management	17
14	Solution concept engineering	17
14.1	General	17
14.2	Applicable tools and methods	18
15	Design optimization	18
15.1	Parameter design for robustness	18
15.2	Tolerance design	18
15.3	Applicable tools and methods	18
16	Prototyping, testing, and validation	18
16.1	General	18
16.2	Applicable tools and methods	18
17	Build planning	19
17.1	General	19
17.2	Applicable tools and methods	19
18	Build start-up	20
18.1	General	20

18.2	Applicable tools and methods	20
19	Build	20
19.1	General	20
19.2	Applicable tools and methods	20
20	Packaging design, logistics, channel management, consumer information, and operating instructions	20
20.1	General	20
20.2	Applicable tools and methods	21
20.3	Logistics	21
20.4	Marketing claims	21
21	Customer support	21
21.1	General	21
21.2	Applicable tools and methods	21
22	Customer satisfaction	21
22.1	General	21
22.2	Applicable tools and methods	21
23	Product end-of-life disposal, recycle, reuse, and other sustainability concerns	22
23.1	General	22
23.2	Applicable tools and methods	22
24	Flow to next generation development	22
24.1	General	22
24.2	Applicable tools and methods	22
Annex A (informative) Examples of applicable methods and tools		23
Annex B (informative) Concept relationships and their graphical representation		66
Bibliography		67