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Application of statistical and related methods to new technology and product development process —

Part 1: General principles and perspectives of quality function deployment (QFD)

Application des méthodes statistiques et des méthodes liées aux nouvelles technologies et de développement de produit —

Partie 1: Principes généraux et perspectives de déploiement de la fonction qualité (QFD)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 69, *Applications of statistical methods*, Subcommittee SC 8, *Application of statistical and related methodology for new technology and product development*.

This second edition cancels and replaces the first edition (ISO 16355-1:2015), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

— throughout the text, addition of relevant informative references to the other parts in the ISO 16355 series, which are also added to the Bibliography.

A list of all parts in the ISO 16355 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Quality function deployment (QFD) is a method to assure customer or stakeholder satisfaction and value with new and existing products by designing in, from different levels and different perspectives, the requirements that are most important to the customer or stakeholder. These requirements are well understood through the use of quantitative and non-quantitative tools and methods to improve confidence of the design and development phases that they are working on the right things. In addition to satisfaction with the product, QFD improves the process by which new products are developed.

Reported results of using QFD include improved customer satisfaction with products at time of launch, improved cross-functional communication, systematic and traceable design decisions, efficient use of resources, reduced rework, reduced time-to-market, lower life cycle cost, improved reputation of the organization among its customers or stakeholders.

This document demonstrates the dynamic nature of a customer-driven approach. Since its inception in 1966, QFD has broadened and deepened its methods and tools to respond to the changing business conditions of QFD users, their management, their customers, and their products. Those who have used older QFD models will find these improvements make QFD easier and faster to use. The methods and tools shown and described represent decades of improvements to QFD; the list is neither exhaustive nor exclusive. Users should consider the applicable methods and tools as suggestions, not requirements.

This document is descriptive and discusses current best practice; it is not prescriptive by requiring specific tools and methods.

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Application of statistical and related methods to new technology and product development process —

Part 1: General principles and perspectives of quality function deployment (QFD)

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1 Scope

This part of ISO 16355 describes the quality function deployment (QFD) process, its purpose, users, and tools. It does not provide requirements or guidelines for organizations to develop and systematically manage their policies, processes, and procedures in order to achieve specific objectives.

Users of this part of ISO 16355 will include all organization functions necessary to assure customer satisfaction, including business planning, marketing, sales, research and development (R&D), engineering, information technology (IT), manufacturing, procurement, quality, production, service, packaging and logistics, support, testing, regulatory, and other phases in hardware, software, service, and system organizations.

2 Normative references

There are no normative references cited in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
quality function deployment
QFD
managing of all organizational functions and activities to assure product quality

Note 1 to entry: The organization is responsible for product quality and strives for it via defining, testing, building, commercializing, and supporting the product.

Note 2 to entry: Literal definition is that the “quality function” is “deployed” to all other business functions and departments who play a role in assuring quality and customer satisfaction.

3.2
voice of customer
VOC
communications from the customer

Note 1 to entry: The communications from the customer may be verbal, written, video, audio, animation, or other form and may be descriptive, behavioural, or ethnographic.

Note 2 to entry: *Customer* is defined in ISO 9000:2015, 3.2.4.

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