First edition 2018-11

Ergonomics of human-system interaction —

Part 500: Ergonomic principles for the design and evaluation of environments of interactive systems

Ergonomie de l'interaction homme-système —

Partie 500: Principes ergonomiques pour la conception et l'évaluation d'environnements des systèmes interactifs



Reference number ISO 9241-500:2018(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Contents Foreword Introduction			Page
2	Normative references		
3	Term	is and definitions	
4	Ergonomic principles for the design and evaluation of environments		
	4.1	General considerations	
	4.2	General considerations Basic principles	
		4.2.1 Introduction to the basic principles	
		4.2.2 Fit for the intended user population	
		4.2.3 Versatility - flexibility	
		4.2.4 Freedom from interference between task and environment	5
		4.2.5 Postural change4.2.6 Maintainability	5
		4.2.6 Maintainability	5
		4.2.7 Adaptability	5
	4.3	Accessibility	
	4.4	User information	6
5	Conf	ormance	6
Bibliography			7

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 <u>www.iso</u> .org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human-system interaction*.

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 <u>www.iso.org/members.html</u>.

A list of all parts in the ISO 9241 series can be found on the ISO website.

Introduction

This document introduces basic ergonomic principles for the design of environments for interactive systems.

This document deals with the physical environment in which a user can be assigned one or more spatial environments to accomplish a task. The entirety of the spatial environments assigned to a user is called environment.

The use of interactive systems takes place within a physical environment the design of which is decisive for a successful outcome. According to the system concept of ISO 26800, the physical environment is embedded in an organizational, a social and a cultural environment.

These principles can be applied to a variety of environments including dedicated environment, activity based environment and mobile environment. Further guidance on application to these environments is provided in other specific standards in the ISO 9241-500 series. Relevant physical attributes of the environment include issues such as furniture, spatial layout, equipment, air quality, thermal conditions, lighting, and noise.