



BSI Standards Publication

## Ergonomics of human-system interaction

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

## National foreword

This British Standard is the UK implementation of ISO 9241-500:2018.

The UK participation in its preparation was entrusted to Technical Committee PH/9, Applied ergonomics.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2018  
Published by BSI Standards Limited 2018

ISBN 978 0 580 97810 4

ICS 13.180; 35.180

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2018.

### Amendments/corrigenda issued since publication

Date	Text affected
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**INTERNATIONAL  
STANDARD**

**ISO  
9241-500**

First edition  
2018-11-26

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**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)

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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](http://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](http://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](http://www.iso.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 [www.iso.org/members.html](http://www.iso.org/members.html).

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.



# Ergonomics of human-system interaction —

## Part 500:

# Ergonomic principles for the design and evaluation of environments of interactive systems

## 1 Scope

This document specifies ergonomic principles which apply to the user requirements, design, and procurement of the physical equipment and environment, which contribute to the context of use of interactive systems. It provides requirements, recommendations and explanations related to these principles.

In particular, the general principles and requirements specified in this document apply to the standards specifying functional design of furniture and equipment constituting the environment.

The principles specified in this document utilize ergonomic knowledge (from the disciplines anthropometry, acoustics, vision, thermal environments, indoor air quality, mechanical vibrations, etc.) to design and evaluate environments that enhance usability (effectiveness, efficiency and satisfaction), accessibility, performance and well-being for organized and non-organized use of interactive systems.

The intended users of this document include:

- developers of systems, products and services;
- public and corporate purchasers;
- occupational health and safety professionals;
- architects and interior designers;
- human resource professionals;
- usability/ergonomics/human factors professionals.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>