



**International  
Standard**

**ISO 16710-2**

**Ergonomics methods —**

**Part 2:  
A methodology for work analysis to  
support design**

*Ergonomie —*

*Partie 2: Méthodologie d'analyse du travail à l'appui de la  
conception*

**First edition**

iTeh Standards  
(<https://standards.itih.ai>)  
Document Preview

ISO/PRF 16710-2

<https://standards.itih.ai/catalog/standards/iso/c698b527-26bd-4bc3-9e97-b0efd3bc00c3/iso-prf-16710-2>

**PROOF/ÉPREUVE**

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

ISO/PRF 16710-2

<https://standards.iteh.ai/catalog/standards/iso/c698b527-26bd-4bc3-9e97-b0efd3bc00c3/iso-prf-16710-2>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2025

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  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

**PROOF/ÉPREUVE**

© ISO 2025 – All rights reserved

# Contents

Page

<b>Foreword</b>	<b>iv</b>
<b>Introduction</b>	<b>v</b>
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>1</b>
<b>4 General requirements in specifying the human components</b>	<b>2</b>
4.1 User experience and resultant activity	2
4.2 Limitations of the scientific and technical knowledge provided by existing ergonomics standards	3
<b>5 Fundamentals</b>	<b>3</b>
5.1 Participatory approach	3
5.2 Work analysis	4
<b>6 Elements of methodology</b>	<b>5</b>
6.1 Analysis of overall work situation components	5
6.2 The “activity-focused work system”	6
6.3 Principles of work activity analysis	7
6.3.1 General	7
6.3.2 Observation	7
6.3.3 Description	8
6.3.4 Interpretation	8
6.4 Knowledge validation process	9
<b>7 The work activity in the design process</b>	<b>10</b>
<b>8 Recording the process and reporting the outcomes</b>	<b>11</b>
8.1 Traceability	11
8.2 Assessment outcome and validation	11
8.3 Assessment report	11
<b>9 Coherence with other standards</b>	<b>12</b>
<b>Annex A (informative) Example of requirements specification to be integrated into tender submission for ergonomics design for work equipment</b>	<b>13</b>
<b>Annex B (informative) Some techniques used for work analysis in an ergonomic approach</b>	<b>19</b>
<b>Annex C (informative) The approach and ergonomic analysis applied to design: Stages and processes</b>	<b>28</b>
<b>Bibliography</b>	<b>31</b>

## 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 document 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)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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 the European Committee for Standardization (CEN) (as EN 16710-2:2016) and was adopted without modification other than those given below. It was assigned to Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 1, *General ergonomics principles*, and adopted under the “fast-track procedure”.

— Source documents for [3.2](#), [3.4](#), [3.6](#) have been updated to ISO 6385:2016.

A list of all parts in the ISO 16710 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](http://www.iso.org/members.html).

## Introduction

The ergonomic design approach involves considering human capabilities, skills, limitations and needs. It is developed on the basis of a decision process, which calls upon not only scientific and technical knowledge data provided by existing standards but also expression of the “know-how” capitalised by the intended user population. Know-how and other knowledge data provided by standards can only become meaningful when based on preliminary analysis of real-work.

Ergonomics design focuses on the actual activity of operators. The methodology described in this document therefore increases the effectiveness and efficiency of the machinery or system being designed; improves human working conditions; and reduces adverse effects on health, safety and performance.

This methodology can lead to one or more suitable solutions embracing situations to be confronted by future users. Applying this will raise productivity, improve work quality, reduce technical support, maintenance and training needs, and will enhance user/operator satisfaction.

Application of this methodology will be most effective when management is closely involved (adoption, communication, etc.).

Extensive ergonomics knowledge exists in relation to organizing and establishing an efficient design process. Applying this knowledge, this present document structures a user-based approach and proposes corresponding requirements for project managers. This approach complements existing design methods and requires reference to ergonomists.

This process concerns both established, as described by ISO 12100, and emergent risks and their association with the independent evolution of any system, user variability and conditions of equipment usage.

In this respect, the methodology for work analysis presented in this document is based on the resultant design being at least partly determined by anticipated future developments, especially those indicated by the client.

This is a shared procedure, in which the client provides specifications detailing the knowledge helpful to a design suited to the needs and expectations of users. Examples of the contribution of an ergonomics design approach to preparing specifications are included in informative [Annex A](#).

Design based on an ergonomics process is necessary to meet any “performance obligation” (i.e. obligation of result).

This document complements knowledge generated by work activity analysis to enhance the quality of references and other solutions validated within a participative framework. This is indeed the case when a compromise solution cannot be found in relation to a specific point because the underlying knowledge cannot be validated. This document facilitates orientation towards a shared final decision.