

ERGONOMICS & SAFETY IN PRODUCT DESIGN

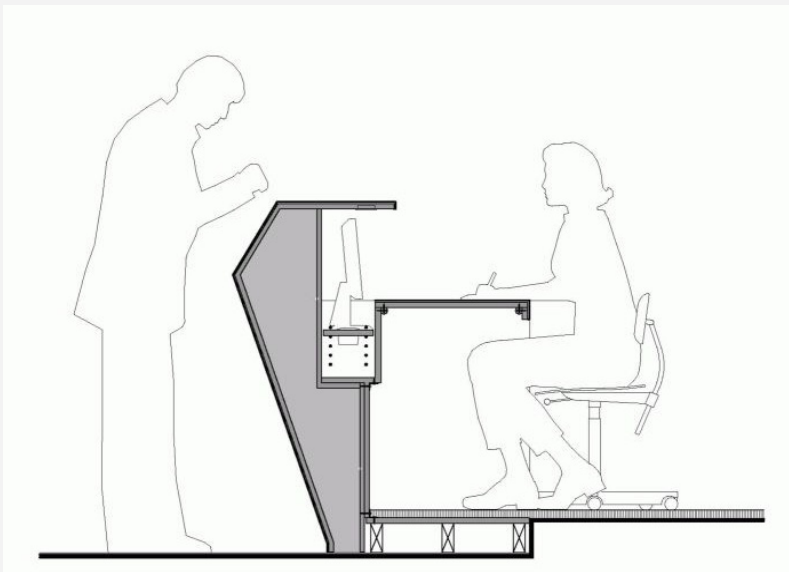
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Human-centered design is a creative approach to interactive systems development that aim to make systems usable and useful by focusing on the user, designing around their needs and requirements at all stage, and by applying human factor, usability knowledge, and techniques (Wikipedia, 2017).

INTRODUCTION

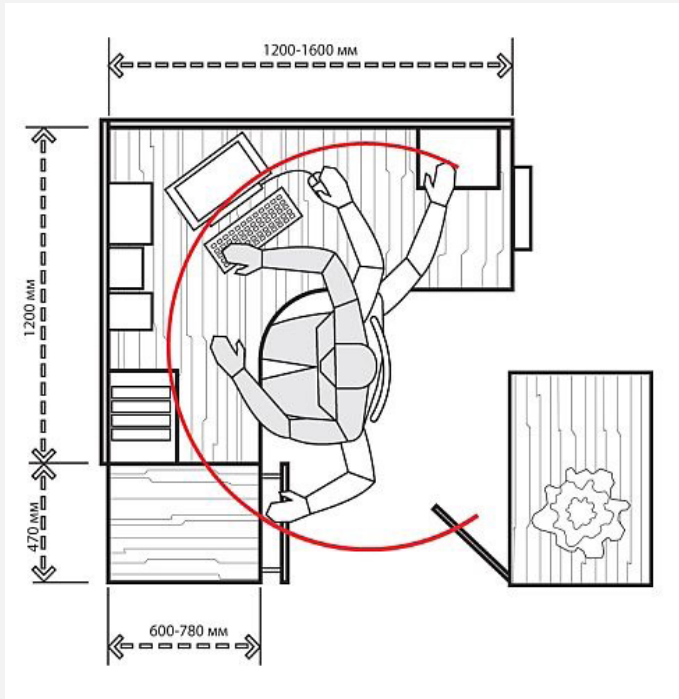
Human-centered design is more suitable for the demand of people, such as product design and spatial distribution. A more humanized design can improve working efficiency and satisfaction with the product.

As stated previously, human-centered design is about designing workplace, tools, and much of the equipment people use in the manufacturing and service industries, as well as the products from these industries for use by people (Lehto & Buck, 2007, p.10). Therefore, the design of the product must be safe and achieved maximum efficiency. Ergonomics has a huge practical effect in this part.



ERGONOMICS, HEALTH AND SAFETY

Ergonomics, considered in its widest sense, affects all work activities, from simple everyday things like sitting and writing at a desk or lifting and carrying a load, through to complicated operations such as controlling a nuclear power station (Nicholson and Ridd, 1988, p.4). The application of ergonomics principle is therefore essential to good occupational health and safety practice for all work activities. In contrast, the design of the lack of scientific principles will often create inconvenience of life, and even some wrong habits will lead to chronic disease.



ERGONOMICS IN PRODUCT DESIGN

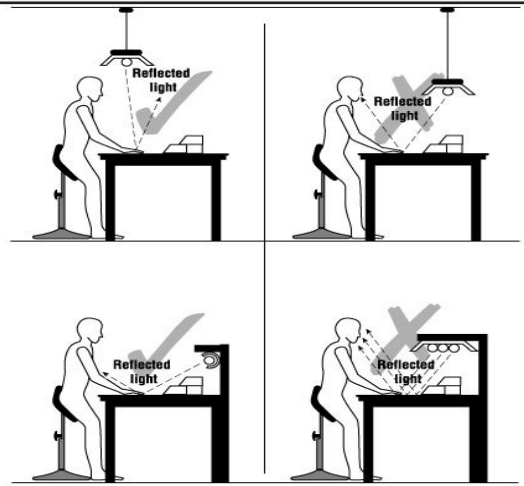
THE NEED FOR SAFER PRODUCTS

Safety is an obvious criterion for a ‘ usable ’ product, all consumer products should be safe, efficient, reliable and durable. An unsafe product is unusable in that it will certainly not be efficient or reliable and may not be durable either. Ergonomist suggest that consumers are becoming increasingly intolerant of poor design, and look for indicators of good design.



CONCLUSION

Human factors/ergonomics (HFE) has great potential to contribute to the design of all kinds of product and facilities with people, but faces challenges in the readiness of its market and in the supply of high-quality applications (Bruder and Buckle, 2012). In order to contribute to future design development, HFE must demonstrate its value more successfully to the main stakeholders of design.



THE ROLE OF ERGONOMICS IN DESIGN SAFETY

At the root of all accidents is a product person interaction which has in some way failed, and either the product, person, circumstances or environment has precipitated this failure. Norris and Wilson (2001) stated that ergonomics has an important role to play in consumer safety by ensuring that this interaction is safe, and by improving product design, the central influence on consumer safety.

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