

Ergonomia tuotantolaitoksen suunnittelussa

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5.5.2023



9.00 Webinaarin avaus ja ergonomian periaatteita
tuotantolaitoksen suunnittelussa, Maria Lindholm, ERY:n pj

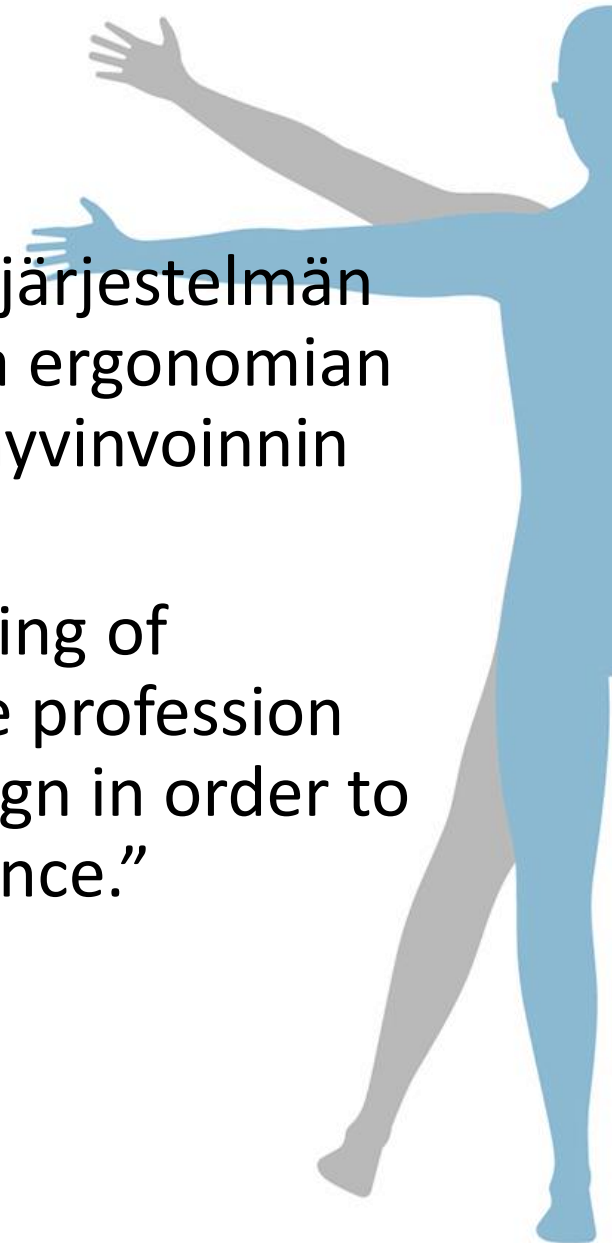
9.15-9.45 Esimerkkejä tuotantolaitoksista, Eija Kupi, Fazer Makeiset Oy

9.45-10 Keskustelu

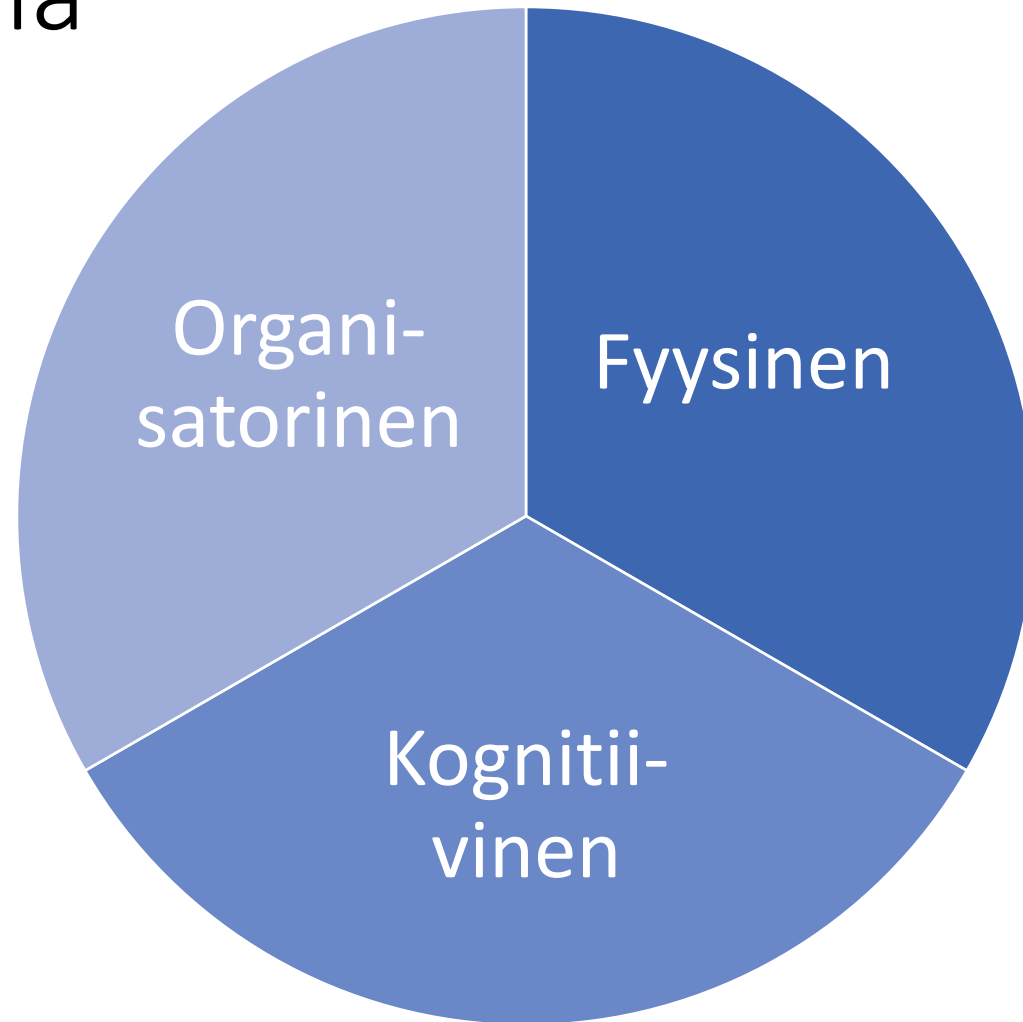


Määritelmä

- "Ergonomia tarkastelee tieteenalana ihmisen ja toimintajärjestelmän muiden osien vuorovaikutuksia ja soveltaa ammattialana ergonomian teoreettisia periaatteita, tietoja ja menetelmiä ihmisen hyvinvoinnin ja toimintajärjestelmän tehokkuuden optimoimiseksi".
- "The scientific discipline concerned with the understanding of interactions among humans and other elements. It is the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance."
(International Ergonomics Association [IEA], 2020)

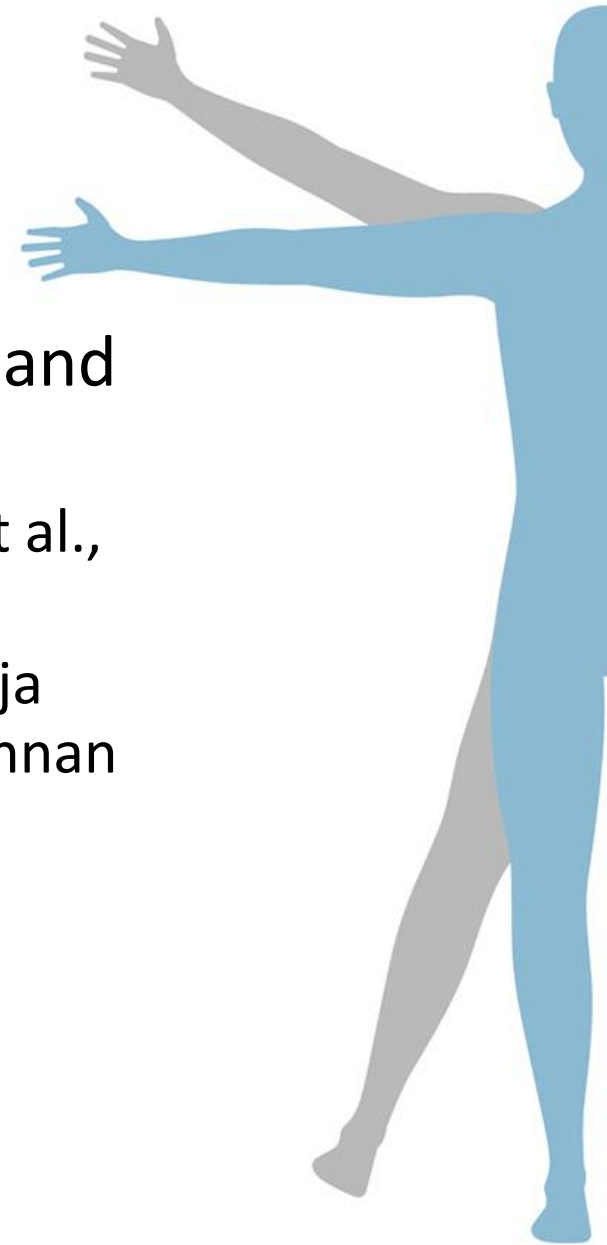


Ergonomia



Johtaminen

- Ergonomia tulee ottaa huomioon kaikilla prosessien suunnittelu- ja toteutustasoilla (Kidd, 1991; Siemieniuch and Sinclair, 1995)
 - Tuotannon lisäksi tukitoimet, kuten kunnossapito (Brundage et al., 2019)
 - Ergonomien ja insinöörien tiivistä yhteistyötä eri toiminnoissa ja tuotannossa, ergonomian tavoitteiden sovittaminen liiketoiminnan tavoitteisiin, tavoitteiden vastuuttaminen (Village et al., 2015)



Work system design

- Ennaltaehkäisevä ja proaktiivinen, järjestelmällinen lähestymistapa (Dul et al., 2012; IEA & ILO, 2020)
 - Analyysit, arvioinnit, suositukset, vaatimukset, määrittelyt, toimenpiteet
- Päätökset vaikuttavat laaja-alaisesti



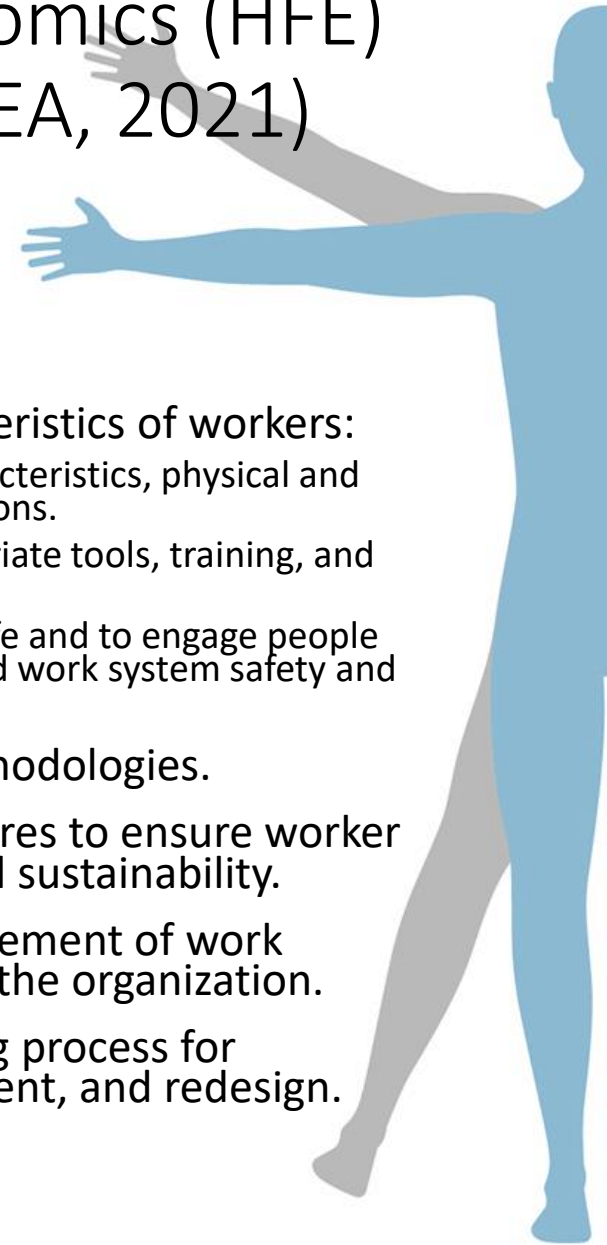
“Principles and guidelines for human factors/ergonomics (HFE) design and management of work systems” (ILO & IEA, 2021)

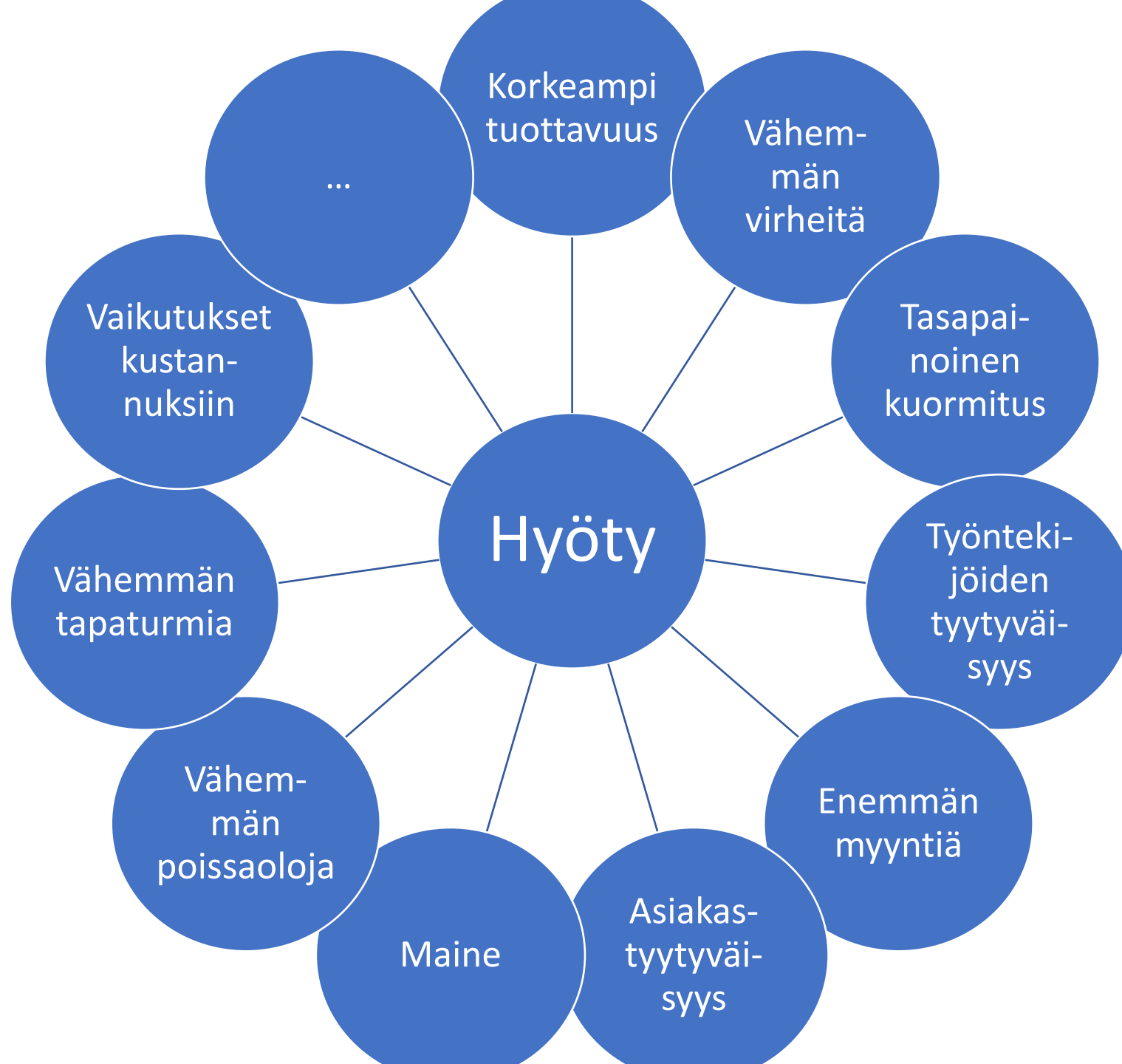
Principles

1. Ensure worker safety, health, and wellbeing in the optimization of work systems as a top priority.
2. Design and manage work systems to ensure organizational and worker alignment, continuous evaluation and learning, and sustainability.
3. Create a safe, healthy, and sustainable work environment from a holistic perspective, understanding and providing for human needs.
4. Account for individual differences and organizational contingencies in the design of work systems.
5. Make use of collective, trans-disciplinary knowledge and full participation of workers for designing systems, detecting problems, and creating solutions for HFE in work systems.

Guidelines

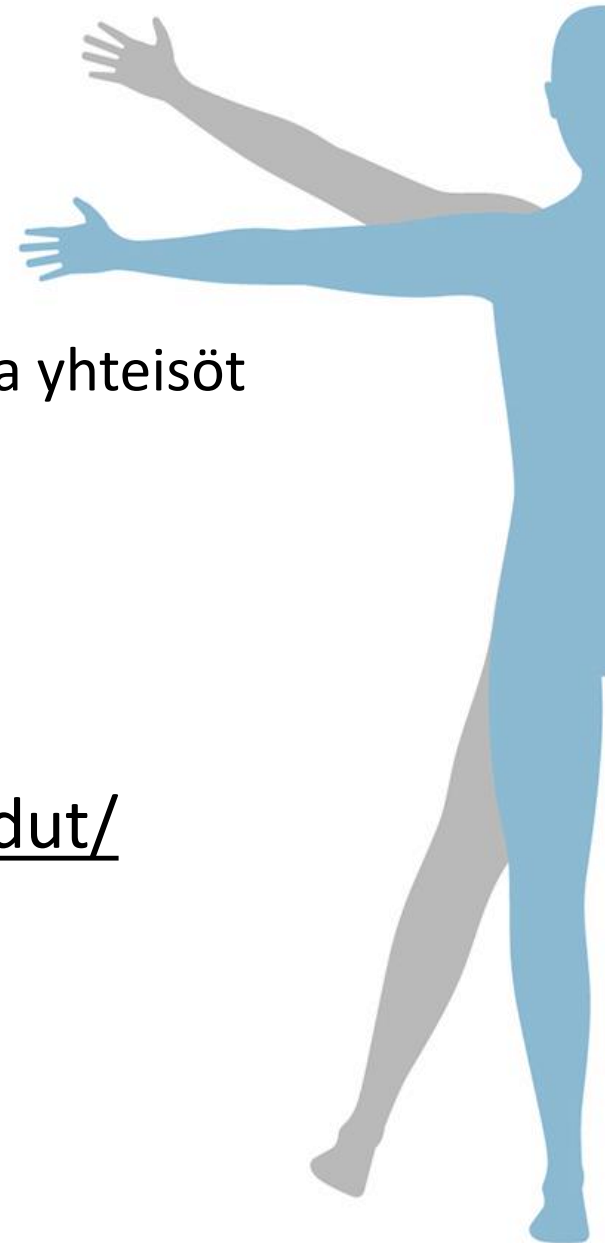
1. Use a systems approach.
2. Consider all relevant characteristics of workers:
 - 2a. Consider demographic characteristics, physical and cognitive capabilities and limitations.
 - 2b. Provide workers with appropriate tools, training, and control to perform work.
 - 2c. Design work systems to be safe and to engage people in ways that maximize worker and work system safety and sustainability.
3. Apply participatory HFE methodologies.
4. Incorporate proactive measures to ensure worker safety, health, wellbeing, and sustainability.
5. Tailor HFE design and management of work systems to characteristics of the organization.
6. Sustain a continuous learning process for evaluation, training, refinement, and redesign.





Suomen Ergonomiayhdistys

- Suomen Ergonomiayhdistyksen tavoitteena on
 - yhdistää ergonomiaa työssään soveltavat ja edistävät ihmiset ja yhteisöt
 - edistää ergonomian tutkimusta, koulutusta ja tiedonvälitystä
 - tukea käytännön ergonomiatyötä
- Liity jäseneksi,
<https://www.ergonomiayhdistys.fi/liity-jaseneksi/jasenedut/>



Lähteet

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- Kidd, P.T. (1991). Human and computer integrated manufacturing: A manufacturing strategy based on organization, people, and technology. *International Journal of Human Factors in Manufacturing*, 1(1), 17–32. <https://doi.org/10.1002/hfm.4530010104>
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