

## Stronger, Together: Human Factors, Safety and Productivity'

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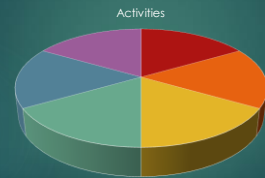


Chartered Institute  
of Ergonomics  
& Human Factors

## Our vision and mission

- ▶ "Ergonomics Everywhere"
  - ▶ 'A world where **ergonomics and human factors** are recognised, valued and applied to the benefit of **people, organisations and society**
  - ▶ 'to develop and share our understanding of ergonomics and human factors, **demonstrate the benefits for human well-being and organisational success**, and bring about adoption in everyday life'

## Our Royal Charter means we are committed to



- ▶ promote learning
- ▶ carry out research
- ▶ provide bursaries, prizes, grants
- ▶ arrange workshops and conferences
- ▶ promote knowledge
- ▶ organise and support groups who do valuable work

## CIEHF in 2017

- ▶ We fund **Sector Groups** to identify and undertake project work to deliver benefits to life and work
  - ▶ engages volunteers directly with peers, policy makers and influencers
  - ▶ Manufacturing is one of these groups
    - Defence, Transport, Health, Energy, Life & Work are the others
- ▶ We run a planned, focussed **Media & PR campaign**
  - ▶ Fed from real activities taking place within each Sector Group
  - ▶ Recently we sponsored a survey of UK manufacturing interests
- ▶ We are re-inventing the **Ergonomics Design Awards**
  - ▶ An annual showcase of all things inventive from an E/HF standpoint
  - ▶ Learning from manufacturing giants, like General Electric

## What we run

- ▶ Six to eight workshops, seminars and conferences each year that engage existing members and new supporters.
  - ▶ Events this year: the role E/HF plays in the design of medical devices, in robotics and **in manufacturing**, in sport, in aviation safety and in the decommissioning of nuclear and oil and gas facilities.
  - ▶ Our annual conference in April each year attracts over 300 delegates and promotes cross-learning: all sectors can learn from each other.
- ▶ Up to 20 webinars throughout the year, including one with GE
- ▶ Member magazine, "The Ergonomist" connects subscribers to developments across the breadth of the discipline, 6 times per year
- ▶ Regional Groups provide networking and mentoring opportunities
- ▶ Access to knowledge and journals, often back to issue 1

## Some facts: UK manufacturing

- ▶ 9<sup>th</sup> largest manufacturer in the world
- ▶ 2.7 million employees
- ▶ 45% of UK exports by value
- ▶ One quarter of all production is exported
  - ▶ Manufactured exports to US equal those to Germany + France combined (£40bn)
- ▶ 68% of UK R&D
  - ▶ Chemicals, pharma and transport account for 2/3rds
- ▶ A continuing net creator of jobs (alongside US, Germany)
- ▶ NW region generates the most output and employs the most people
- ▶ Increasingly productive (compared to other sectors of the economy)
- ▶ Source: EEF/2016/17 fact card

## Ergonomics is powerful

- ▶ E/HF can differentiate the output of manufacturers; works hand in hand with engineering developments
- ▶ Brings a science-based approach which can support the justification of change
- ▶ Can sustain jobs, both existing, new and related
- ▶ Can protect workers from job transference and job obsolescence

## Factors that sustain healthy manufacturing

- ▶ better quality
- ▶ **more skilled workforce**
- ▶ shift from low to high **productivity**
- ▶ **improvements in automation and technology**
- ▶ increased investment in R&D
- ▶ a more integrated global economy.

## The research we commissioned

- ▶ The research was conducted amongst over 1,000 manufacturing professionals and was led by The Chartered Institute of Ergonomics and Human Factors (CIEHF), a non-profit body for ergonomists and human factors practitioners, in collaboration with CV-Library, the UK's leading independent job site.
- ▶ The study sought to ascertain the true perception and reality of automation and robotics amongst those who experience it first-hand.
- ▶ April 2017.

## The march of automation

1. 47.8% of industry workers admit there has been a rise of automation within their manufacturing environments over the last few years.

## Not new

2. The majority of manufacturers (66.4%) reveal that up to 50% of processes in their place of work are automated.

## Continuing

- ▶ 3. 74.3% of industry professionals anticipate the levels of automation increasing in the future.

## Value

- ▶ 4. Almost 3 out of 4 manufacturers (74%) believe automation is good for the UK's manufacturing industry.

## Opposition

- ▶ 5. However, over half of industry professionals (52%) admit that there is resistance from staff when implementing new automated processes.

## New jobs too

- ▶ 11. A third of manufacturers have also witnessed job creation as a result of the introduction of robots or automated processes.

## Incentives

- ▶ 12. 68.5% of industry professionals claim to know what 'human factors' means
  - ▶ 4 out of 5 industry professionals (mean av. of 86.3% and 79.5% = 82.9%) believe there should **be an increased focus on human factors and how workers may influence the design of robots?**
- ▶ 13. Almost three quarters of manufacturers believe that improved design that enables robots to understand and interact with human behaviour would reduce mistakes and be beneficial to workers.

## Outcomes

- ▶ Many manufacturers do see why E/HF adds **value**, rather than adding **cost**
- ▶ **Some yet need to be convinced: role for IEA, FEES**
- ▶ Ergonomists can bring particular skills, but will need to be ever increasingly agile, inventive and responsive to ensure that work is made better here for both manufacturers and workers, together
- ▶ Inevitably, work and jobs will be exported if products cannot be made competitively to higher and higher standards
- ▶ **Ergonomics/HF alone** has the capability to integrate workers and automation more closely, and more effectively.

## Conclusions

- ▶ Healthy companies understand what customers really want, and adapt to produce what customers want
- ▶ Customers will pay for quality, delivered on time, to a known standard
- ▶ E/HF can identify, fashion, shape and deliver better manufacturing, which delivers better products and employment.

## Questions / Add your voice!

- ▶ Join the Chartered Institute of Ergonomics and Human Factors TODAY as an Associate and grow from there!
- ▶ [www.ergonomics.org.uk](http://www.ergonomics.org.uk)