E-tools seminar 2023: OSH E-tools in the construction sector and other outdoor work
Bilbao, 4 – 5 October 2023
Day 2 - Summary

Safety and health at work is everyone’s concern. It’s good for you. It’s good for business.
M. Rohrich

- Cf car development – no thought of safety at first
- Now Etools offer many opportunities for safety
- Things are developing fast and we have to think of the other technological changes, E.g. tele-medicine so all physiological data is collected and accepted (approved)
A. Stoimenidis

- Need to apply precautionary principle Article 191
- Need to apply all the basics e.g. training RA, etc.
- Training is vital, and the need for consent if essential
M. Rifá Fabregat

- ENSPHO
- Provide the practical solutions to the workplace
- Wide range of practices
- How do we deal with SMEs – lacking resources as etools come in
- Clear communication is essential to build up the trust needed for etool application
- Large issue with training – cost and time
- How do we deal with differences such as gender, physiology
- How do we ensure work-life balance and right to disconnect
- What is the quality control mechanisms for etools? Does this vary if it is being used as PPE?
- Privacy and data protection need to be addressed in depth
- There is clear regulation and not always clear agreement between the social partners
L. Guyon

- Need to have better knowledge and framework
- Essential for training and knowledge about the use of etools
- We need joint approach with social partners and government to address the issues as it is happening and in everyone's interest to do it properly
M. Okrasa

- CIOP – architecture in OSH management
- Very difficult to follow different stages of construction
- Need to have scalability and flexibility in next generation of IOT
- Need to have multiple streams of human and environmental data for AI so human is not overwhelmed
- Wanted to build on existing usable systems but make it more usable
- Looking for options for notification on health emergencies – but no storage of data for privacy reasons
- Weather data is important – including UV data and moving to real time personalized risk assessment without any sensors on the worker – based on location, duration of exposure, data from PPE being used
- Allows danger zones identifies on site so if worker enters then alerts to worker and manager. Danger zones can be flexibly defined
- Fall data also recorded with machine learning algorithm that actually recognizes a genuine fall
- Support for OSH manager in inspection also with training for evacuation
Discussion

- Medical sensors are increasingly approved and used. This comes across into work-located – tools
- Issue where does this data goes to and is stored
- Legal requirements for data exchange needs to be clear e.g. between medical services and OH services, and employer
- Links back to the discussion with what type of device – medical, PPE, Work equipment, … for conformity and certification
- Cost is a huge issue for the SMEs
- Needs to be dialogue in all companies
- Purpose of etools should be for OSH not for another reason primarily
Group 3 discussion

- Nothing is free, we are the product!
- Use for specific use. ONLY.
- What do you measure and what do you process?
- Data security – what are you afraid of Trust in use by employer, healthcare?
- Data retention is massively important
- Modern etools don’t need to use the phone outdoor and indoor phones)
- Heart rate irregularity – what do you do with? De facto employment screening
- Primary we need to protect the people
- Have to start with the hierarchy of prevention = don’t be too dependent – are we going too much to control from elimination?
- Human factors and safety behaviors key themes
- Portugal are building a platform for data controlling for all construction for public construction
- Agriculture forestry, sea and maritime, transport all have different conditions.
- Remote tachogram monitoring system – working time and breaks. For NLI.
- In BE you have to register entry onto construction site. Data crossed with social inspectors for informal sector.
- Ireland cross-data with planning council
- PT controlling entry to site with hard hat
- Environmental particulates and other climate monitoring – access to data?
- Is weather data accurate and localised enough
- Education is vital – weather apps are on the phone
- Some PPE can measure sweating and temperature in forestry to avoid heat stress. Ditto firefighters
- Oxygen use can be an indicator (cf. diving)
- Firefighters have monitor who alerts in dangers
- Professional sports – a lead
- Needs – individual monitoring, lone working, communication and training, and recognising education levels. Contractors and sub-contractors...
- BIM a huge barrier for SME – cost
- Grey area between OSH and informal sector/working time
- Training, induction so key in construction – Transferable safe pass. Multiculturalism is proving more difficult
- How do we deal with vulnerable workers
- Daily briefing is vital!!! But communication of information is vital
- BE OSH plan on con must include how to communicate and who to communicate – RESPONSIBLE PERSON
- Procurement process is major step in construction
- QI and estimators need to understand impact of their calculations
- Environmental issues like climate not considered in planning and construction phases
- Will come in with cost effectiveness need to be in action
- Social partner agreement on etools - Get back to basics – get foundations right
- Most technology will be embedded in PPE – in fall technology, etc.
- Transfer across sector – e.g. from healthcare of people living alone
- Typology of etools
  - Digital tools for RA – more can be done in the design stage, hard with evolvement of site, keep life cycle in check. BUT SMES can’t do BIM! OIRA and BSMART are essential.
  - Digital tools for risk management monitoring – these are coming in too. Often digitalisation of paper systems
  - Digital tools for control
- Accelerometer on forklifts. Controls are being more embedded
- Generational attitude change?
- Will come in for safety critical
- How to address long-term health issues.
- Potential major training benefits
- Automation of near miss data – used for robotics. Tower crane
- Adapt to technological change -
- Adapt work to worker

http://osha.europa.eu
Plenary feedback

- Drivers and barriers
  - SMES have problem, Perception as burden, Need branding and communication and simple, awareness raising. COST for small businesses
  - Carrot and stick approach needed
  - Parallel systems – safe pass and also incentive schemes
  - Training is a big issue; tools can also be integrated into training. Etools for training with VR is a bit opportunity. But VR training not always considered training.
  - Generational gap
  - Do we need KPIs (global goals?)
  - A real focus on etools.
  - Tools need to fit to culture
  - TRUST
  - Sensors complementing
  - Not shifting responsibility to workers
  - Nudge technology
  - The innovation is there, and it needs to be positive – need simple tools, need to know about control of data (sale of data, control of data, loss of data)
  - Need rules for etools
  - Existing frameworks - tools need to fit into this
  - Social dialogue important
  - Privacy and personal data
  - Balance between risk and regulation and freedom

- Have to consider the human in control
- We have the technology but not yet the legislation. Law not keeping pace.
- How to tailor a tool to specific need – generic solutions often are not the right solution. How to customize?
- Don’t over-rely on data
- Health data monitoring – everyone is different, and these have to be judged not average responses to high temperatures
- Are the tools extra support to keep things space or do they become the thing to rely on. Need a whole prevention system of which etools is a part.
- Construction still is all about fatalities – how can tools reduce fatalities e.g. warning if harness not clipped on.
- TRUST, PRIVACY, COST (for SMES), TRAINING, ADAPTION, COMMUNICATION, ENGAGEMENT, worker,
- Decision-support systems and tools to support workflow
- Practical and affordable – meeting the minimum standards
- More data collection and handling – software can generate info for inspection targeting.
- No blame collection data to help with near miss
- Human and social part of the process is so very important
- Need to remove supervision from the equation. Not a big brother, ownership, no-blame culture. Some flexibility
W. Cockburn summary

- Thanks
- We are only small but we can act as catalyst
- These seminar are essential for communication
- 2 died recently in confined space near here. These were avoidable. Part of wine harvesting, 2 seasonal workers. Have to get all of the groups.