

WG3: PERSONAL PROTECTIVE EQUIPMENT

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1. OBJECTIVES OF THE MEETING

Aims of the working session:

- Knowing the participants and their competences better for further project ideas and collaboration opportunities.
- Brainstorming to identify new project ideas.
- Establishing a roadmap for long-term actions of the Working Group.

2. PROJECT IDEAS

- Integration of electronics: maintenance, batteries too heavy – impact on the comfort. Use of normal powerbank. How to see the powerbank is empty.
- How to test and what to test of smart textiles
- How to control smart textiles ‘standard of smart textiles: what can we test’.
- Electronic part requires a person that looks into that (maintenance) during use.
- It is only possible to make adaptation to already used systems (communication).
- Looking for materials, weave/knit, new model designing; companies are not asking for smart but for multifunctional textiles. Smart could be interesting for the future.
- Investment in technology. Conductive threads cannot be used as the conventional one.
- Cut-resistant knitting: improve puncture resistance is needed – want to save the daily problems.
- Fire fighter: in general, it costs 700 euro and if you need to pay 1500 euro for smart, they will not pay. If there is no need they will not pay it. If they see the benefit (extra value), they will buy it.
- Life Cycle is important: how long can you wear it? 50 washing cycles is needed.
- Look for design, colour – new look.
- Friendly use.
- Standardisation and certification.
- Gap between market and institutes (labs are used for certification, not for development).

- Public tenders. Informing the end users and convince and explain to the authorities.
- Follow initiative of smart PPE in each country – inform the people through website of participants and workshops to wake up to industry.
- Price is an issue, but the need is more important.
- Smart is not needed, if the current PPE are working they are good with it.

3. ROADMAP

- **Long term roadmap: 3 project ideas decided by WG3 participants**
 - **WG3 - IDEA N°1 – Market/end users' needs/awareness/tenders**
 - **WG3 - IDEA N°2 – Testing/certification**
 - **WG3 - IDEA N°3 – Comfort and safety**
- **Short-term roadmap**

WG3 - IDEA N°1

WHY?

- Necessary to know the needs of the end users, otherwise developments will be done that will never be used.

WHAT? Description of the action(s)

- Questionnaire: 10 questions (market, primer, developments made, on-going...), cost of development phase (euro, time), conformity assessment (time, notified bodies involved). The information will be sent to all partners of WG3, who will translate in their own language and send to companies → Set up a call through SAFERA in charge on EU level to prepare and open call.
- Workshops A+A, Techtextil, Workshop Dusseldorf February (H2020 collects ideas what to put in the coming call)

WG3 - IDEA N°2

WHY? Context, objectives ...

- Test methods are needed that enable to define properties – needed to enter the market (and thus to obtain certification)
- Look into PPE that is already experimenting with smart.

WHAT? Description of the action(s)

- List existing methods: Are they standardised? If not connect with standardisation committee, how to get it standardised?
- List methods that are lacking: How to develop new test methods? (funding possible) How to be standardised?

WITH? Partners, equipment, funding,...

- Testing protocol: not only under normal condition, also under load, temperature, ... → working conditions and dynamic testing
- Test method for heatable textiles (test heating and safety (e.g. no explosion).
- EN 469 = normal PPE fire fighters
- Standardisation committee
- Electronic partners

WG3 - IDEA N°3

WHY? Context, objectives...

- Safety is critical and comfort is needed to make people wear it.

WHAT? Description of the action(s)

- Need for development of better sensors
- Construction of the garment need to avoid to limit movement of the person
- Change of air (and cool it) that is inside the garment for chemical garment

WITH? Partners, equipment, funding, ...

- Physiological testing
- Virtual software (physiological data: age, type of action/movement, temperature, wind...): prediction of skin and core temperature.
- Insulation