



Conference

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**Novel technological innovations  
for occupational safety and health**

# **CHALLENGES WITH BRINGING SMART PPE ON THE MARKET – THE GAP BETWEEN REGULATION AND END USERS**



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## **PPE vs. SMART PPE**

*Firefighters PPE today*

*2 minutes time for  
equipping*

*Firefighters PPE of the future*

<http://www.fire-cat.eu>



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## WHAT IS A SMART PPE?

*Smart Fabrics, also known as smart garments, smart clothing, electronic textiles, smart textiles, or E-textiles, can be defined as fabrics that can **sense and react** to external environment via a pre-defined **control mechanism** or **cognitive driven behavior**.*



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## **A SMART PPE should be able to...**

*...sense the physiological parameters of the user*  
*...react to external harsh environment with aim to increase the safety of the user*

**IN A REAL TIME**

*via integrated*  
**control system with a cognitive decision-making**  
**algorithm**



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## Main requirements of a SMART PPE are ...

*...fast equipping possibility (inside 2 min)*

*...control IN A REAL TIME (challenge in the IT technology)*

*...availability from the price perspective (challenge for the PPE manufacturers)*

*...standardization issue*

*...maintaining issue*

*...after sales service*

*...support from end users / public authorities!*

**TENDER!**



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# Main challenges for manufacturers of a SMART PPE are ...

Materials & production technologies

Compatibility & Cost-efficiency

PRICE  
STANDARDS

DURABILITY  
ENERGY  
FLEXIBILITY  
WASHABILITY  
COMMUNICATION  
FASHION &  
COMFORT  
ECO-DESIGN  
COST  
SAFETY &  
PROTECTION



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# SMART PPE: What to do with the PROTOTYPES?

Idea stage ✓

**Problem/solution fit:** it is time to create the optimal solution

**Product/market fit:** test the business model and pricing strategy  
market validation

PRICE  
STANDARDS

**Scaling:** money and people

UPSCALING - smart „factory, serial production



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# SMART PPE: INNOVATIVE Sales approach?

<https://www.ppeb2b.com/>

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WORK SAFE!

Search the entire store ...

REGISTER LOGIN WITH YOUR ACCOUNT

WORKWEAR PERSONAL PROTECTIVE EQUIPMENT CLEANING RAGS HYGIENE SIGNALING FIRST AID ABSORBENTS BRANDS

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More than 5.000 items available from stock, for every specialism and sharp price.

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Already known? [Login with your account](#)

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- Personal protective equipment >

RESPIRATORY PROTECTION HEARING PROTECTION HEAD PROTECTION EYE AND FACE PROTECTION



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**SMART PPE: Creativity in business models is welcome**

**THANK YOU**

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