„smart@fire“

Dr. Daniela Zavec

www.titera.tech - Slovenia

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“OUR PROFESSION WILL ALWAYS BE DANGEROUS, BUT WITH INNOVATIVE TECHNOLOGY WE CAN REDUCE THE RISKS”

More than 100 firefighters across Europe die in action every year while saving others. They lose their way in smoke, become surrounded by a sea of flames, get cut off by sudden rising water, and continually find themselves in perilous situations.

Brigades need innovative ICT solutions that continuously

- measure environmental parameters and a firefighter’s vital functions (Sensors)
- determine their position in buildings and on the field; eg. in the case of forest fires (Localisation systems)
- assess situations better – both on the ground and at a distance (Data transfer)

All this integrated into an equally innovative ‘smart’ firefighter suit.

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Smart@fire is a groundbreaking project ***to encourage companies and researchers*** and provide them with financial means to develop Innovative ICT Solutions that better protect firefighters and help prevent accidents, and to integrate them into Smart Personal Protective Equipment (PPE). For this, Smart@fire employs a unique and novel method of innovative procurement known as pre-commercial procurement (PCP), developed by the Innovation Agency (IWT).

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INNOVATE WITH US IN THREE STAGES

Combining strengths and expertise from various countries and sectors, Smart@fire is developing a joint research and development project for companies and researchers on demand of fire services. For this, it employs a unique and novel procurement method developed by IWT that consists of three stages, preceded by a large scale needs assessment conducted with 961 fire and rescue services.

- **STAGE 1** Smart@fire first organises market consultations in France, Germany and Belgium, where potential suppliers and procurement officers can engage with each other. Find the dates and themes and register online at www.smartatfire.eu.
- **STAGE 2** Next is the pre-commercial procurement in which Smart@fire will procure the development of working prototypes and a test range of Personal Protective Equipment (PPE) with integrated ICT-solutions, all with a view to eventual large-scale production.
- **STAGE 3** Based upon positive test results, EU fire and rescue services will purchase the developed smart suits by launching a final joint EU tender.

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Selected (high-level) functional requirements

- Battery autonomy must be at least 45 minutes (in building conditions, coupled with additional environmental and physiological monitoring devices) and at least 3 hours (outdoor conditions).
- Overall weight of the ICT system is restricted to ~2 kg, well balanced around the body of the fire fighter.
- Speed of deployment and system start-up to fully operational mode is limited to less than 10 minutes (the average time to arrive on the intervention scene).
- Protection against commonly known jamming, tampering and spoofing of all communication
- Average life time of the system should be more than 8 years. Removal of parts of the PPS during turnout gear maintenance and cleaning is allowed.
- The non-removable parts of the PPS should be compliant to common washing procedures used on turnout gear
- The PPS must be resistant to chemicals, toxic gasses and hazardous substances common in during firefighting deployment of turnout gear
- The PPS must be compliant with common requirements on communication devices and electrical equipment, material requirements (e.g. RoHS, RTTE, REACH) en more specifically selected testing procedures related to PPE directive EN469.

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