

## **Innovative Solutions Canada Program**

### **Challenge EN578-170003/28: Head Up Hands Free Fire Fighting**

#### **Attachment 1**

#### **Question and Answer #1**

This document contains questions and answers related to this challenge.

##### **Question #1:**

A question about essential outcomes number 3 of this challenge. It states: detect and display the toxicity of harmful or deadly gases, including the self-contained breathing apparatus (SCBA) or other compromised individual air filtration devices. Does this mean that detection must be done inside the SCBA face piece in case of a defect or breakage, or should the air analyzed be from the firefighter's operating environment?

##### **Response #1:**

The detection of harmful gases and hazards does not have to be done inside the self-contained breathing apparatus (SCBA) face piece. The detection of harmful gases and other hazards in the fire fighters operating environment would likely be derived from body-worn or external sensors, data feeds, and information communications technology information and then depicted inside the SCBA face piece. As for defect or breakage, the SCBA apparatus itself would need to comply with relevant National Fire Protection Association (NFPA) standards. The emphasis for this investment is on providing operators with improved, head-up / hands free, situational awareness information as opposed to fortifying the existing SCBA technology solutions against breakage and failure.