

# Safety Request Form (Aut'23), EDMS#2975840

## ? LHC ODH system End-of-Life in LS3, Need for consolidation?

- **237 sensors in LHC machine:**
  - **every ~300m in arcs (visibility 284m), with flashing lights every 150m**
  - **between 150m & 300m in service areas (LSS)**
- **pre-alarm L2 19%\_O2 (technical alarm)**
- **alarm L3 18%\_O2: 1 sensor: flash +/- 300m from sensor**  
**2nd sensor: Evacuation alarm**
- **Trigger time in minutes (3min to 50min)**
- **walking speed ~1m/s similar to air speed (ventilation towards odd points)**
- **=> 1 to 1 replacement, REX few years before any change 2 to 1 for L3 alarm evacuation**

He spill scenarii for access [Ref.6]:

< 100 g/s: **only for trained personnel**,  
no powering and specific conditions for special zones  
< 320 g/s: Powering Ph1a: **only in LSS** with short escape route (**restricted to powering experts**)  
< 1 kg/s: Powering Ph1b+2: **NO ACCESS**

*Rmk: safe access to LHC when granted, with slow ODH propagation compatible with normal/walking evacuation*