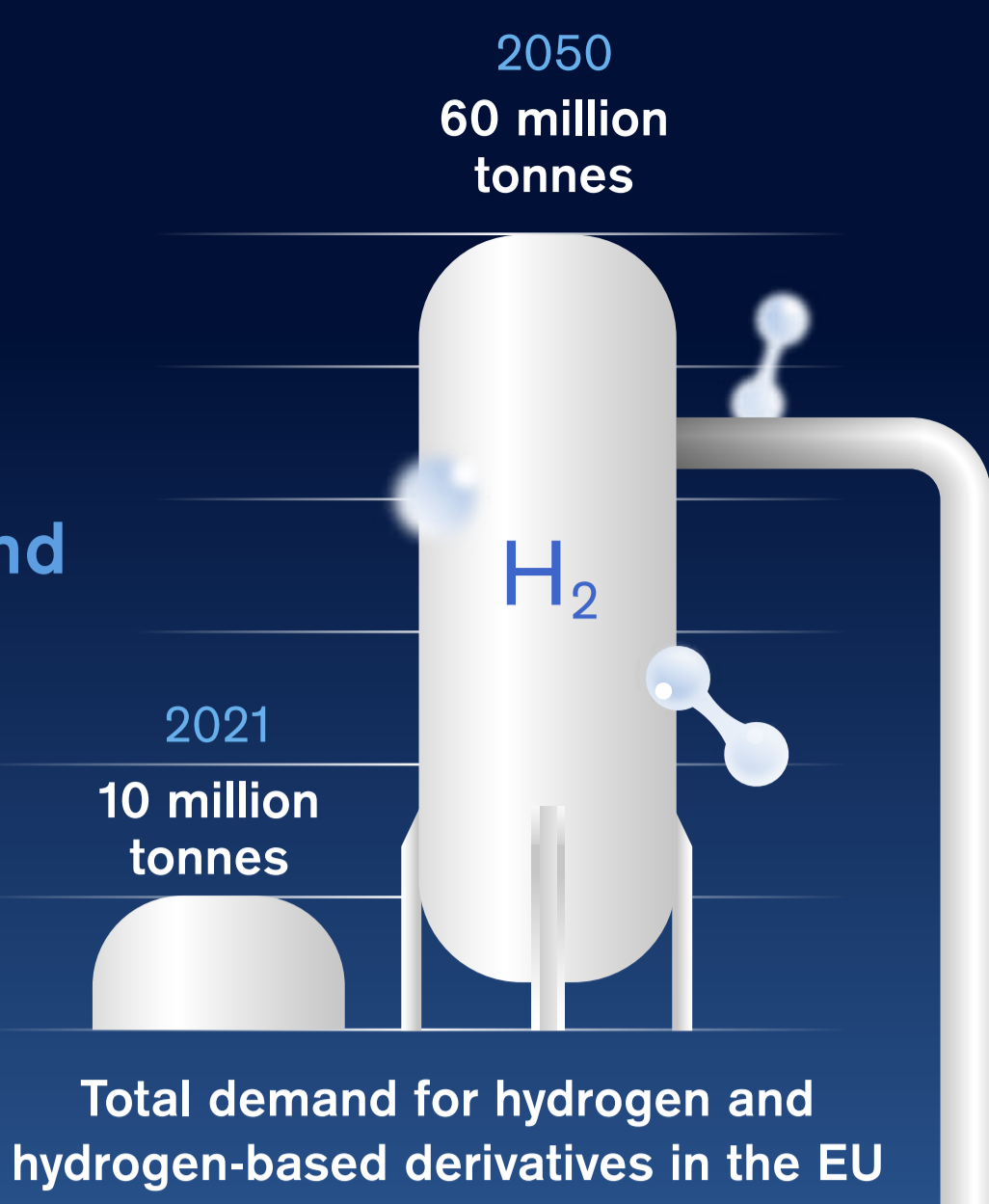


DETECTING GAS LEAKS AT THE SPEED OF SOUND

Massive increase in hydrogen demand

According to a study by the World Energy Council, demand for hydrogen in the EU could increase by 500% by 2050. This will imply a **major increase of pressurised gas installations**, many of them outdoors.



Potentially dangerous

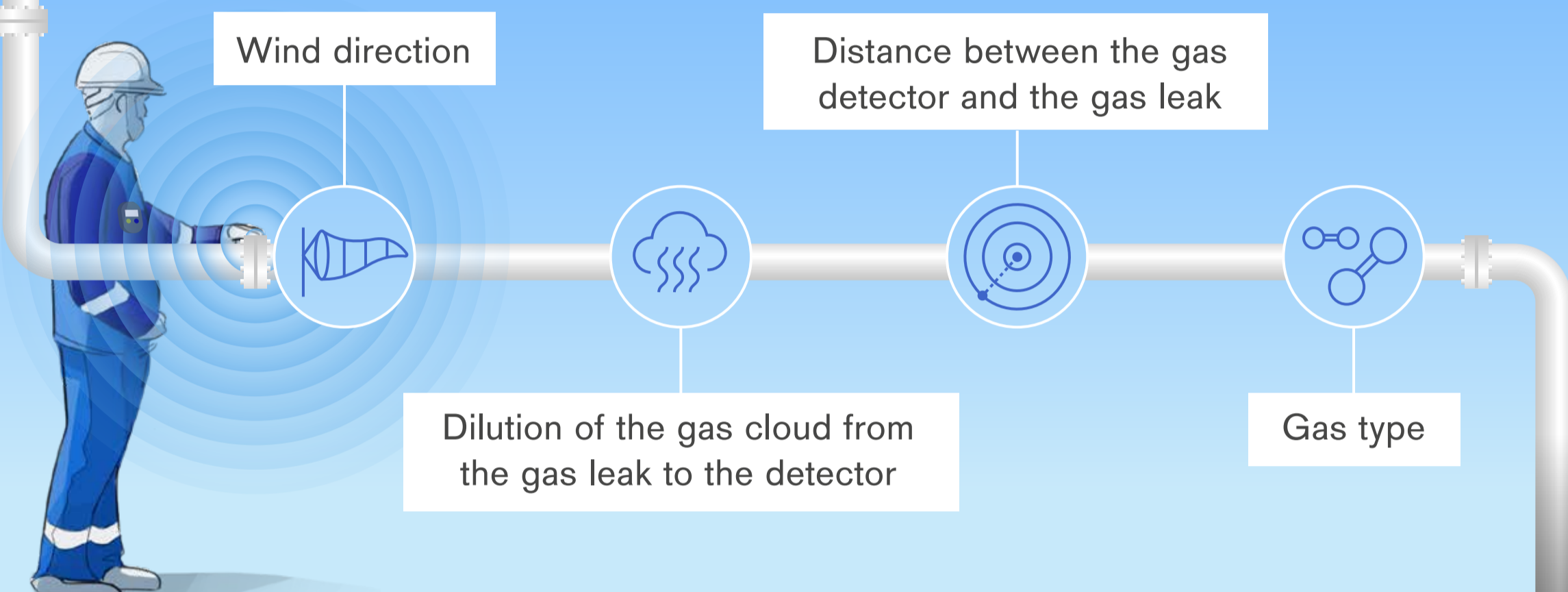
Hydrogen's properties make **handling it safely a challenge**. Hydrogen:

- Leaks easily and can diffuse containment materials due to its small molecules
- Has a 15 times lower level of ignition energy than methane
- Is ignitable even in low concentrations ($\geq 4\%$) in air
- Is 14 times lighter than air and dilutes quickly in ventilated outdoor areas

Detecting leaks

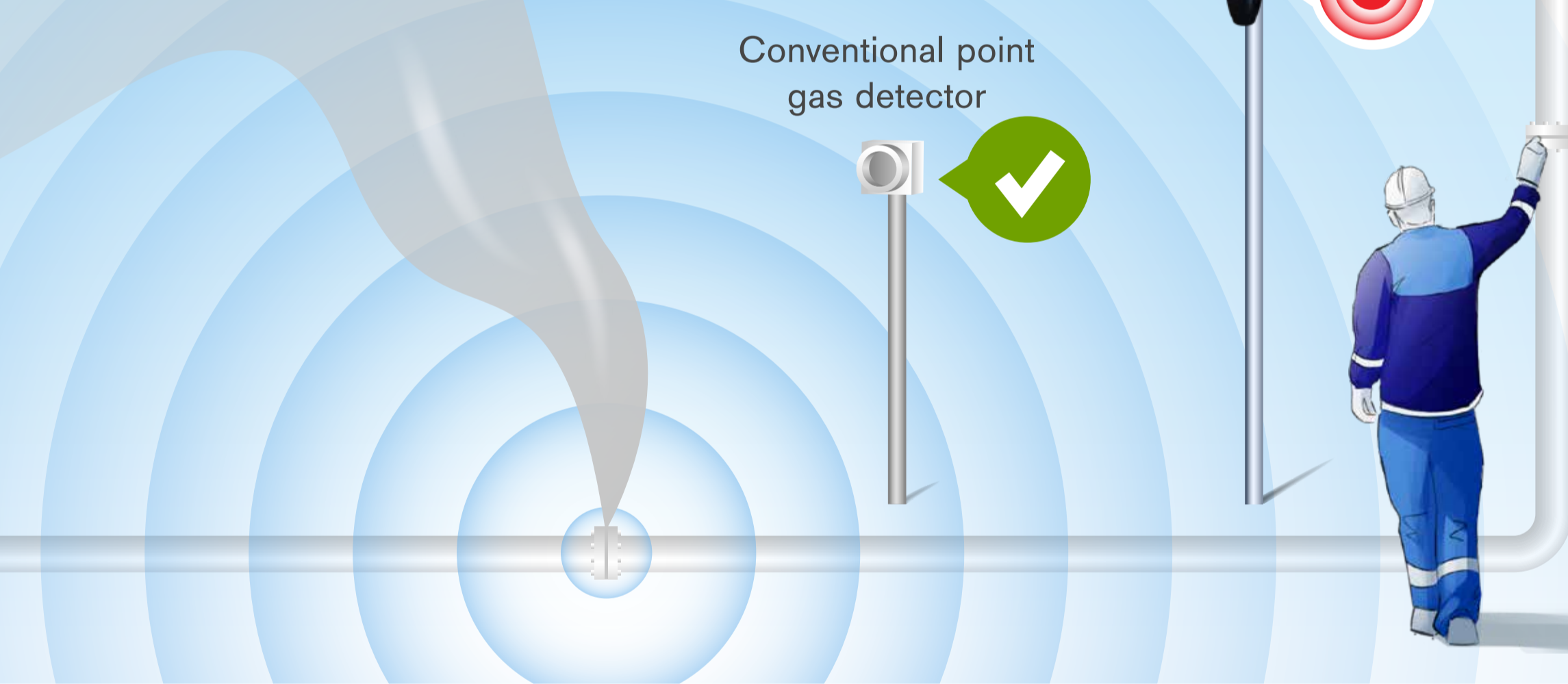
Early detection is key to mitigating risks of catastrophic failures. Due to hydrogen's fast dispersion, the gas can dilute before conventional gas detectors are able to detect it. This way leaks can go unnoticed.

Gas concentration measurement depends on:



How UGLD technology can help save lives

When pressured gas leaks, it creates ultrasounds that Ultrasonic Gas Leak Detectors (UGLD) register. Unlike point gas detectors, this method works independently of weather influences or gas concentration.



When speed is a factor

UGLD technology enables the detection of gas leaks at the speed of sound, giving employees more time to react and potentially save lives.

Design example of a hydrogen compressor station



Increase safety with a matrix of technologies

UGLD is best combined with other technologies like catalytic point gas and hydrogen flame detection to maximise safety.

Ultrasonic gas leak detection with **Dräger Polytron 8900 UGLD**



Flame detection with **Dräger Flame Detectors**

Point gas detection with catalytic bead transmitter for flammable gases with **Dräger Polytron 8200 CAT**

Sources: Nature.com, World Energy Council, TÜV, Lloyd's Register, Dräger Safety

Our experts help you master the challenges of hydrogen

Contact us via hydrogensafety@draeger.com or visit our website www.draeger.com/hydrogensafety

