# Pitch-deck Smart Walls

Fiber optic sensors in Industry 4.0
Smart Sensors
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#### Sensors - definition

https://www.i-scoop.eu/smart-sensors/

**According to Allied Market Research:** 

"A sensor is a device that detects, measures or indicates any specific physical quantity such as light, heat, motion, moisture, pressure, or similar entities, by converting them into any other form which is mostly, electrical pulses".

Mied Market Research)



## The History of Smart Sensors

- Most sensors could be called intelligent by then after the switch to digital signals in the 1980s and the addition of ample new technologies in the 1990s.
- The 1990s also saw the emergence of the notion of "ubiquitous computing," which is considered important in the evolution towards the Internet of Things, notably with advances in embedded computing.
- Around the mid-1990s, the development and implementation of digital electronics and wireless technologies in sensor modules grew whereby on top of sensing, etc., sending data became more and more critical.
  - In 2009, the International Frequency Sensor Association (IFSA) surveyed several people from academia and industry to define a smart sensor.

Source:

https://www.i-scoop.eu/smart-sensors/



#### Conceptual Overview of Connected Smart E-health Ecosystem.

Actuator

One way communication

Smart Hospital

https://www.researchgate.net/figure/Conceptual-Overview-of-Connected-Smart-E-health-Ecosystem\_fig2\_343124 \_947-IoT applications Microphone Glucose Drug delivery Mask sensor Glucose Smart device ((e)) Oxygen Glove sensor Oxygen Heart beat sensor Microphone Temperature sensor RFID sensor Smart Ambulance and Hospital room-1 Covid-19 Patient **Smart Parking** Hospital RFID sensor Hospital room-2 Gateway practitioner: Remote Patient Monitoring Centralized Cloud ((e)) ш Gateway Temperature IoT applications Disinfected robot Smart ((e)) ((e)) device ((e)) ((e)) Covid-19 patient in Glove Smart car Oxygen Healthcare supply Medicine Ventilator Laundry Sensor Two way communication

**Smart Testing Booth** 

**Smart Pharmacy** 

### **Smart Walls in Industry 4.0**

- for seismogpraphic security,
- fiber optic sensors installed inside the Smart Walls,
- possibility of varied applications: wells, dames, mines,
- automated, remotely controlled, programmed,
- pre-tested in different regions of the world and environmental conditions,
- paint themselves, detect fire, make holographic presentations, etc.,
- see the basic idea of Smart Walls in the Figure 1. below:



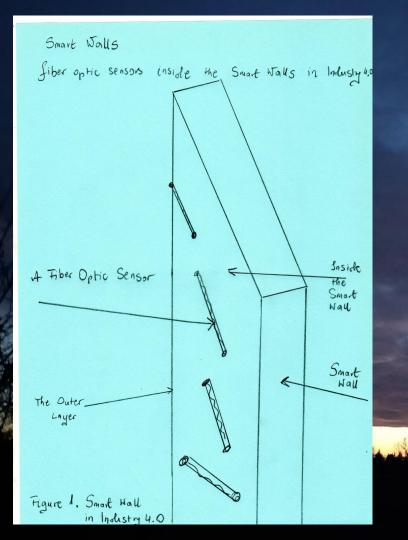


Figure 1. Smart Walls in Industry 4.0