



# EDF USE CASES

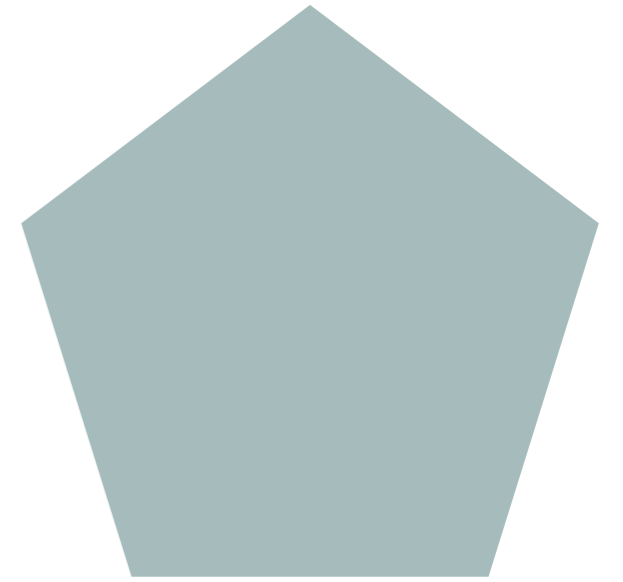
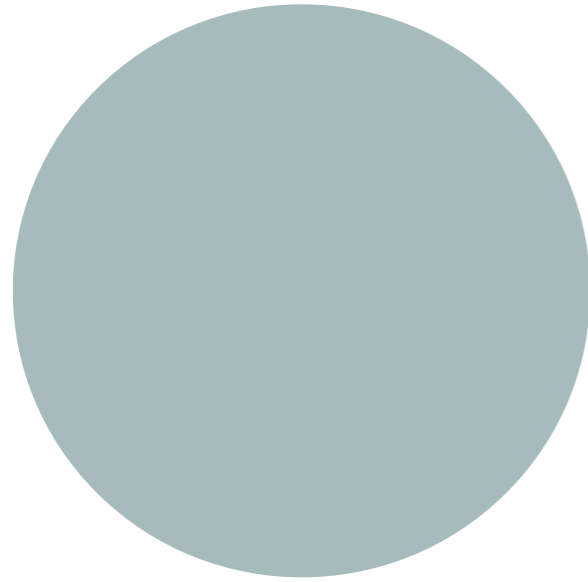
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*Fabien Lavabre  
Senior Cybersecurity Expert*

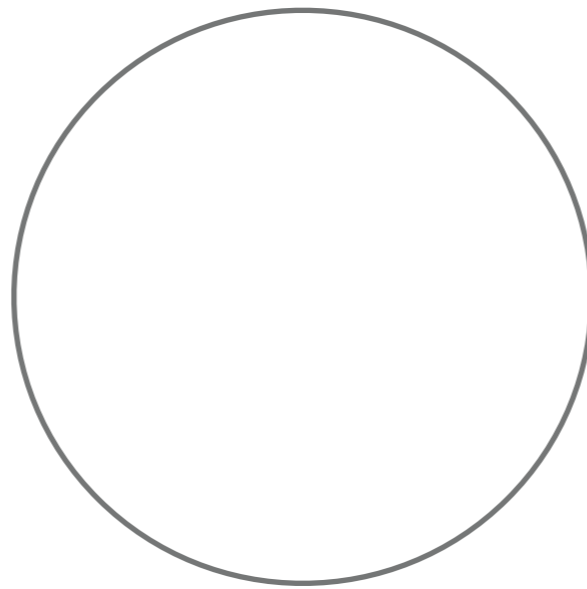


*Trusted zone*

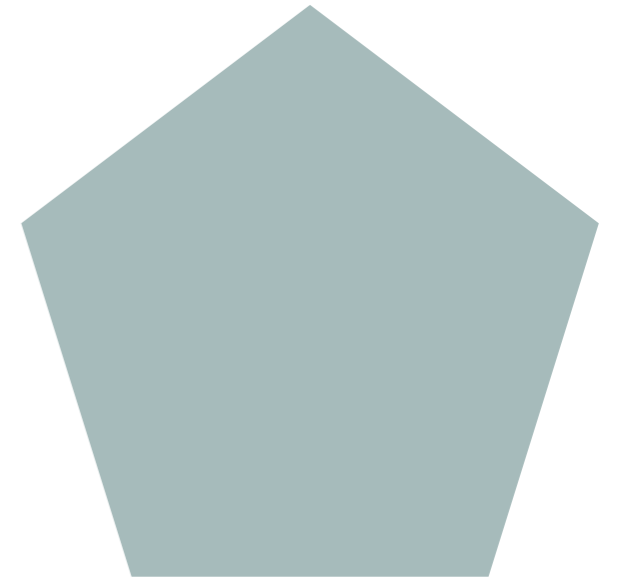
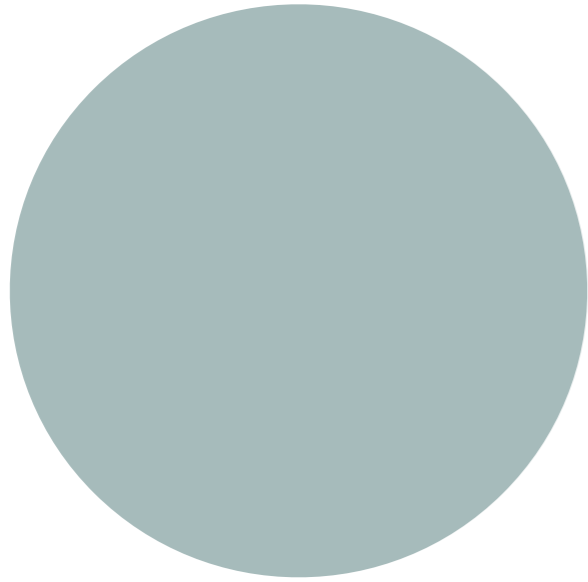
*untrusted zone*



*Airgap hardware bidirectional*



*... around 20  
nuclear plants*



*Logs upload for SoC*



*2 ways  
tcp, udp*



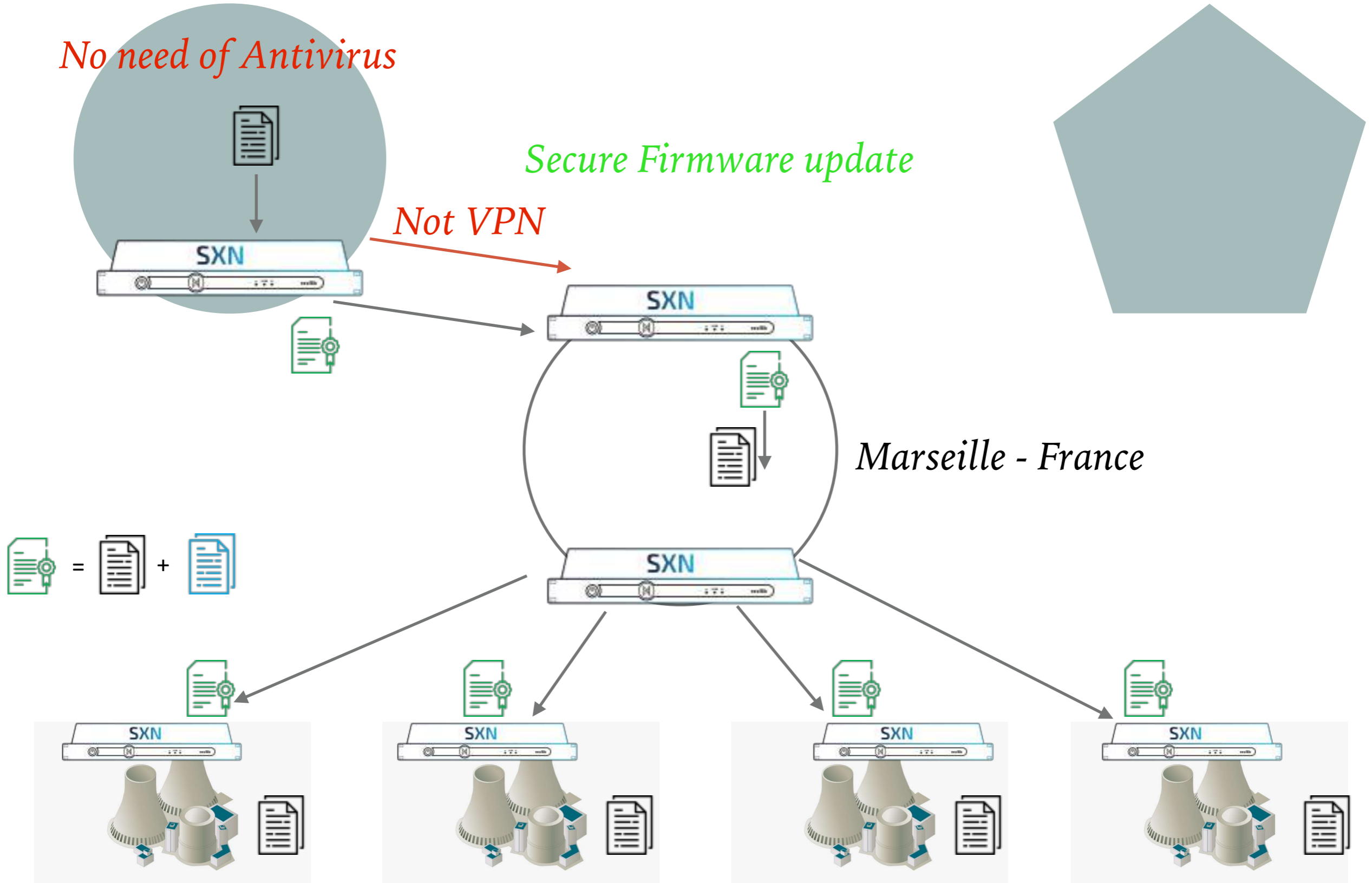
*Trusted zone (firmware, known vendor, ..)*

*untrusted zone*

*No need of Antivirus*

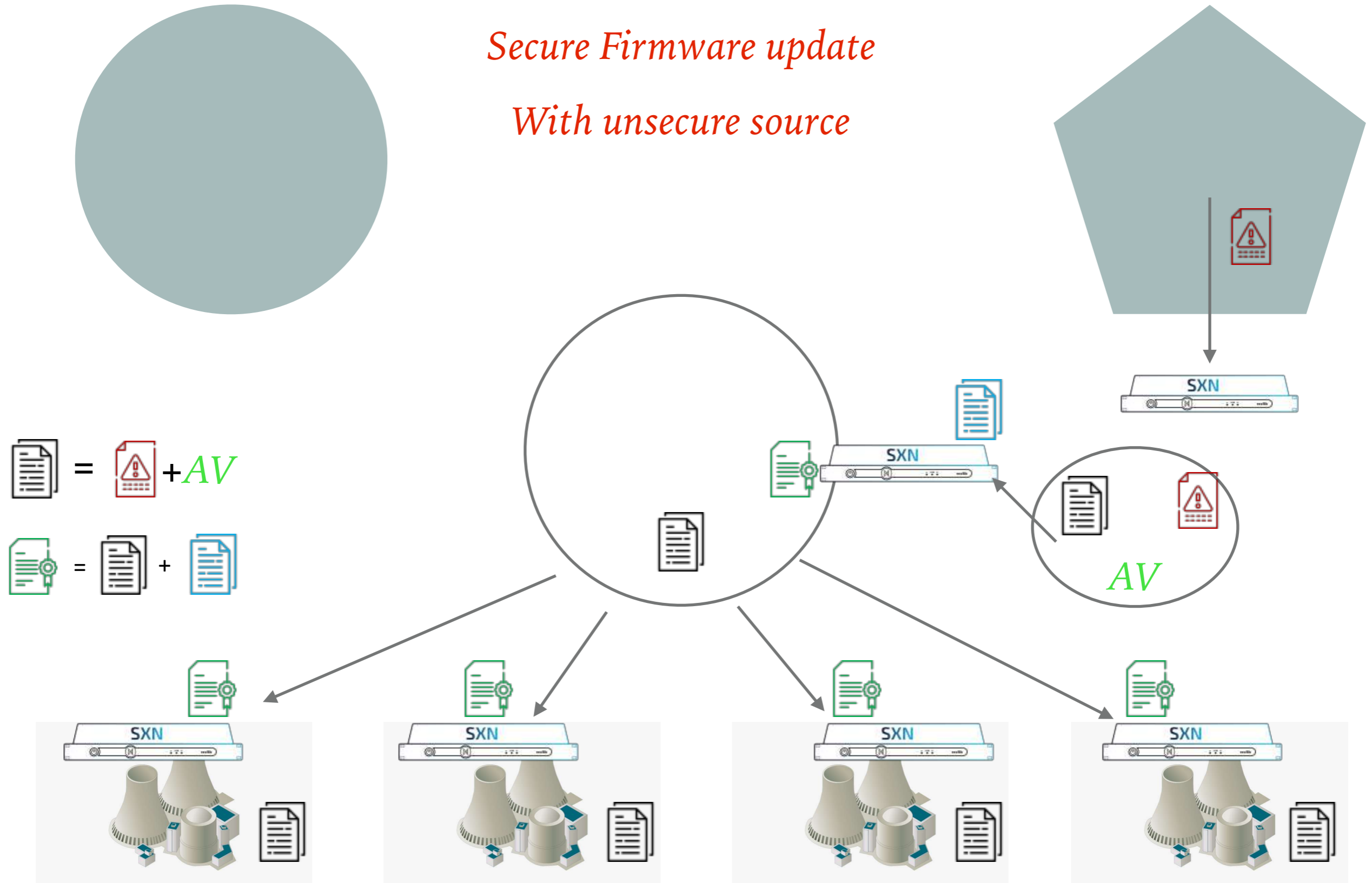
*Secure Firmware update*

*Not VPN*



*untrusted zone*

*Secure Firmware update  
With unsecure source*



## Secure time transfer from a time server (NTP)



*IT*



*OT - NTP server*

# Secure video transfer from a CCTV



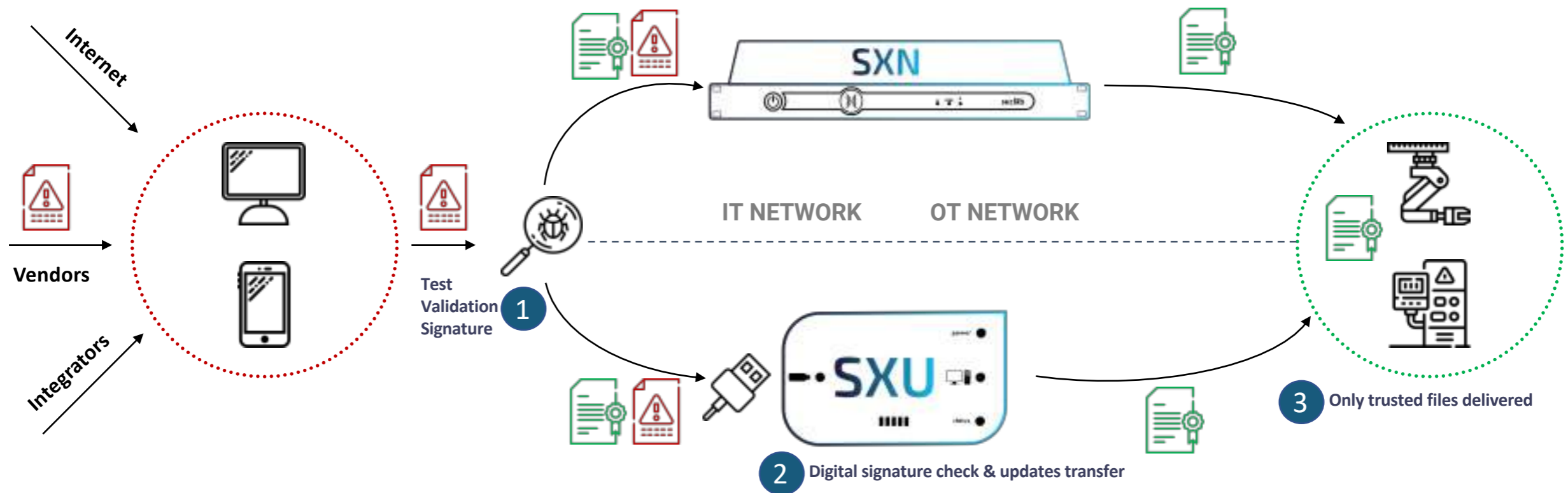
SOC



OT - CCTV

**PROBLEM : Setting up a solution for Network & USB file exchanges that is both highly-secure and lasting**

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**SOLUTION :**

- Use of Secure Xchange Network & USB
- 100% Network & USB isolation
- Only trusted files are transferred
- Immune to Zero Day Exploits

**BENEFITS :**

- Update process easier and more robust
- Easy to deploy : Zero impact on architecture
- Easy to maintain & administrate
- Business Continuity Plan ready





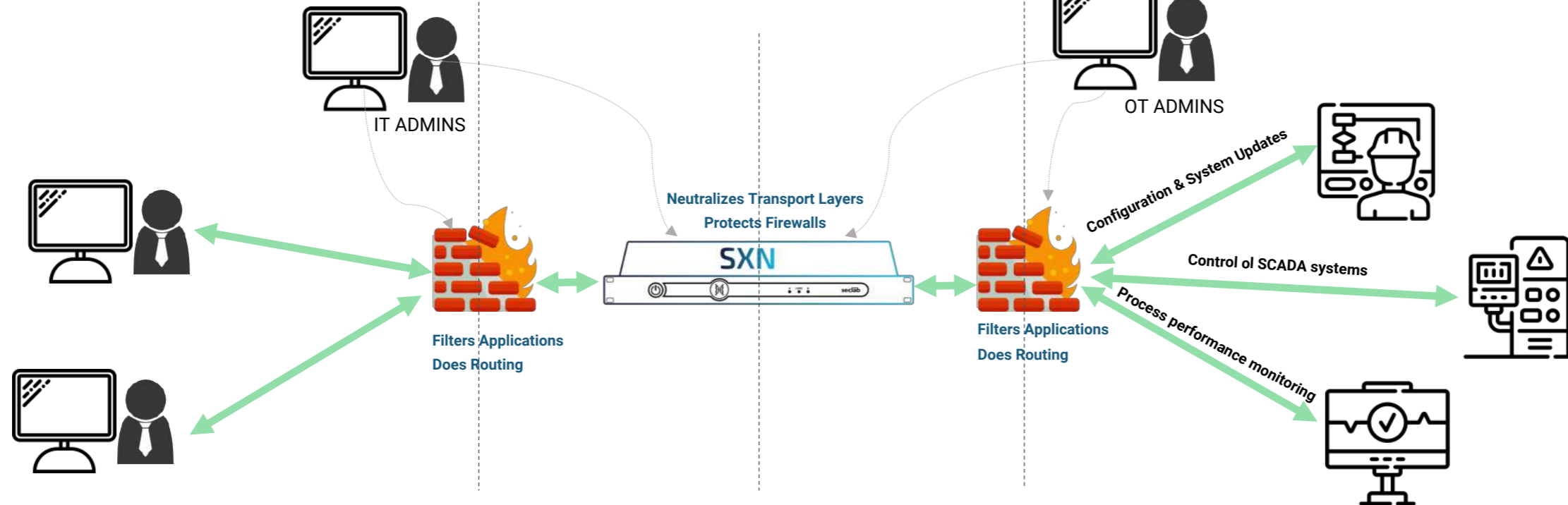
## SNCF CASE STUDY : Improving process performance between nationwide IT & OT Networks

**PROBLEM : More DATA exchanges between IT & OT Networks could compromise both safety & cyber security**

CORPORATE IT NETWORK

NETWORK NEUTRALIZER AREA

OT NETWORK



### SOLUTION :

- ❑ Secure Xchange Network (SXN) between 2 Firewalls
- ❑ Hardware-enforced Network Neutralization by SXN
- ❑ Firewalls protected by SXN
- ❑ DATA Filtering done by Firewalls and / or SXN

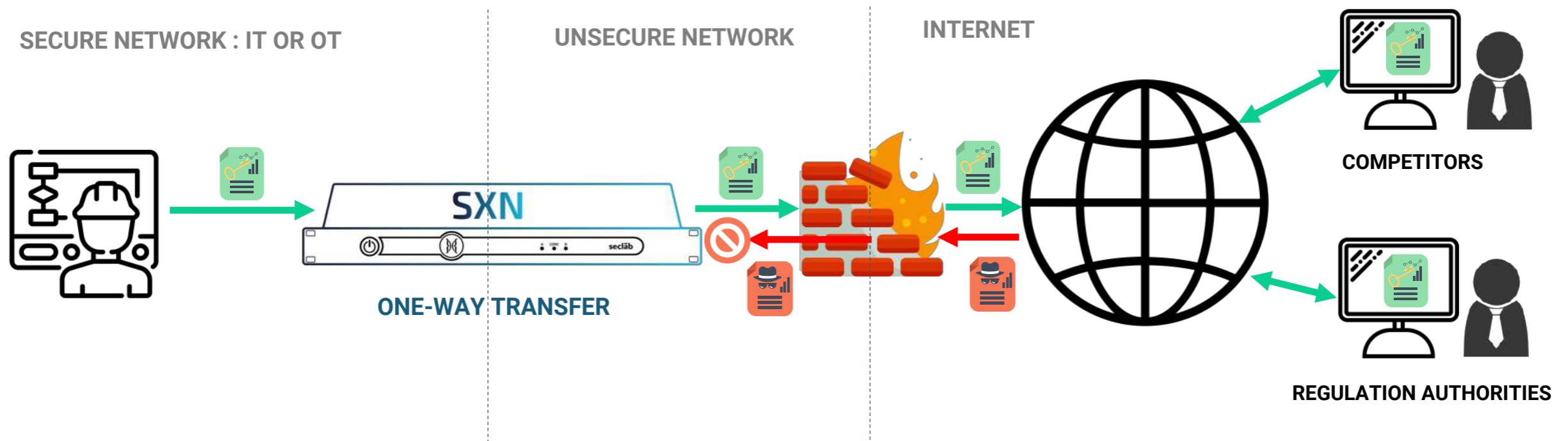
### BENEFITS :

- ❑ Better IT/OT process performance without compromising security
- ❑ Easy to maintain & administrate
- ❑ Decentralized Governance with common goals



## SNCF CASE STUDY : Complying with laws & regulations by making accessible some data to competition

**PROBLEM : Sending DATA to third-parties could compromise the Internal Network**



### SOLUTION :

- Secure Xchange Network behind legacy firewall
- Hardware-enforced Network Isolation
- Direction Control : One-Way Transfer

### BENEFITS :

- Compliance without compromising security
- Easy to deploy : Zero impact on architecture
- Easy to maintain & administrate
- Immune to Zero Day Exploits



Today, in 2019, there is **no reason** to remain vulnerable to cyberattacks, on **industrial networks** and **Critical Infrastructures**.

— *Xavier Facéline*