

# CYBER SECURITY

Cyber Security risk of O&G in Kuwait  
(OT perspective)

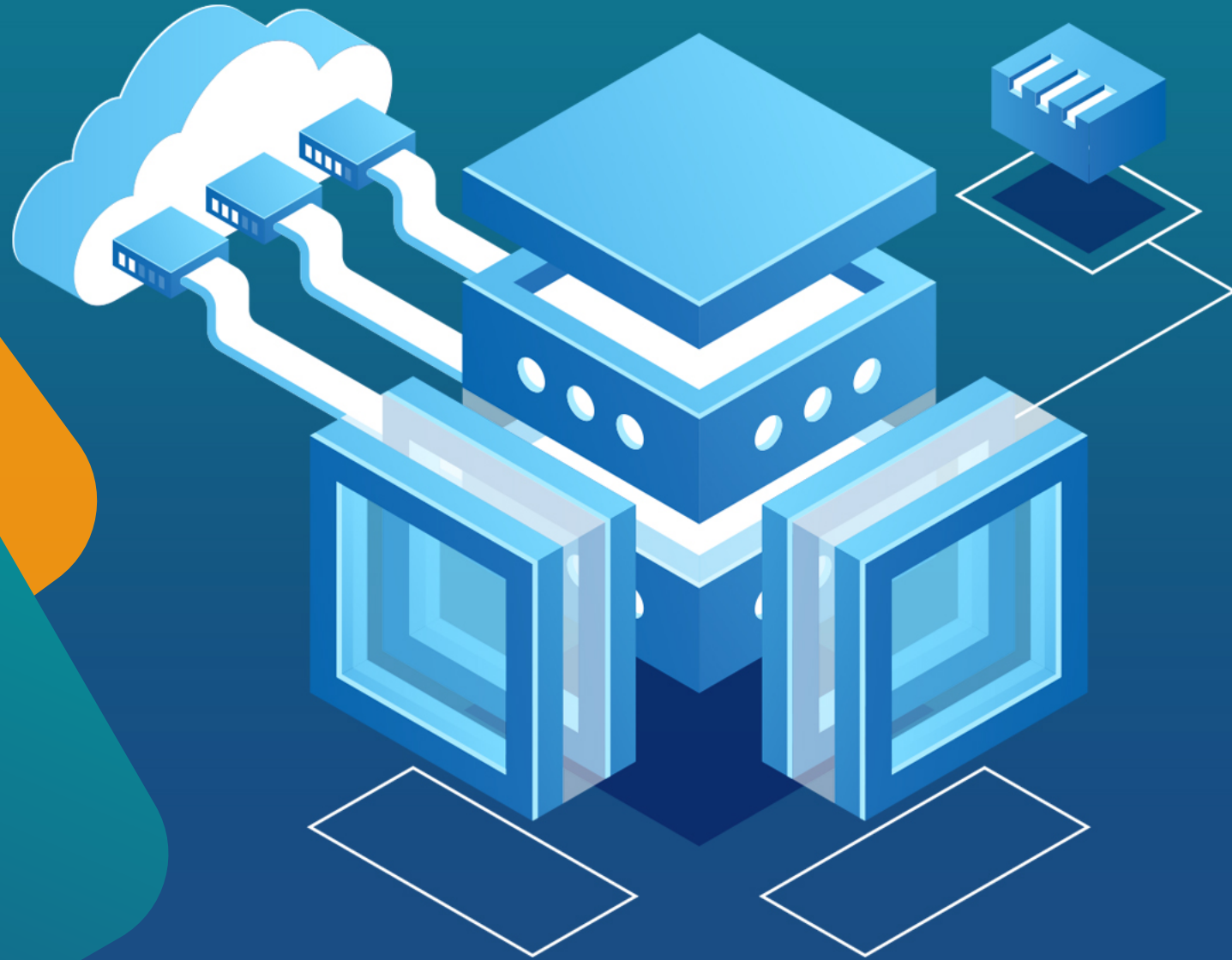
By  
Ahmad Safar



# AGENDA



1. What is Cyber Attack?
2. Cyber Security Factors
3. IOT
4. What is OT?
5. Cyber Security Risks
6. Cyber Security weak chain.



- Deliberate exploitation of computer systems and networks.
- The use of malicious code to alter computer systems.
- Unauthorized compromising of data leading to cybercrimes.

# What is Cyber Attack ?



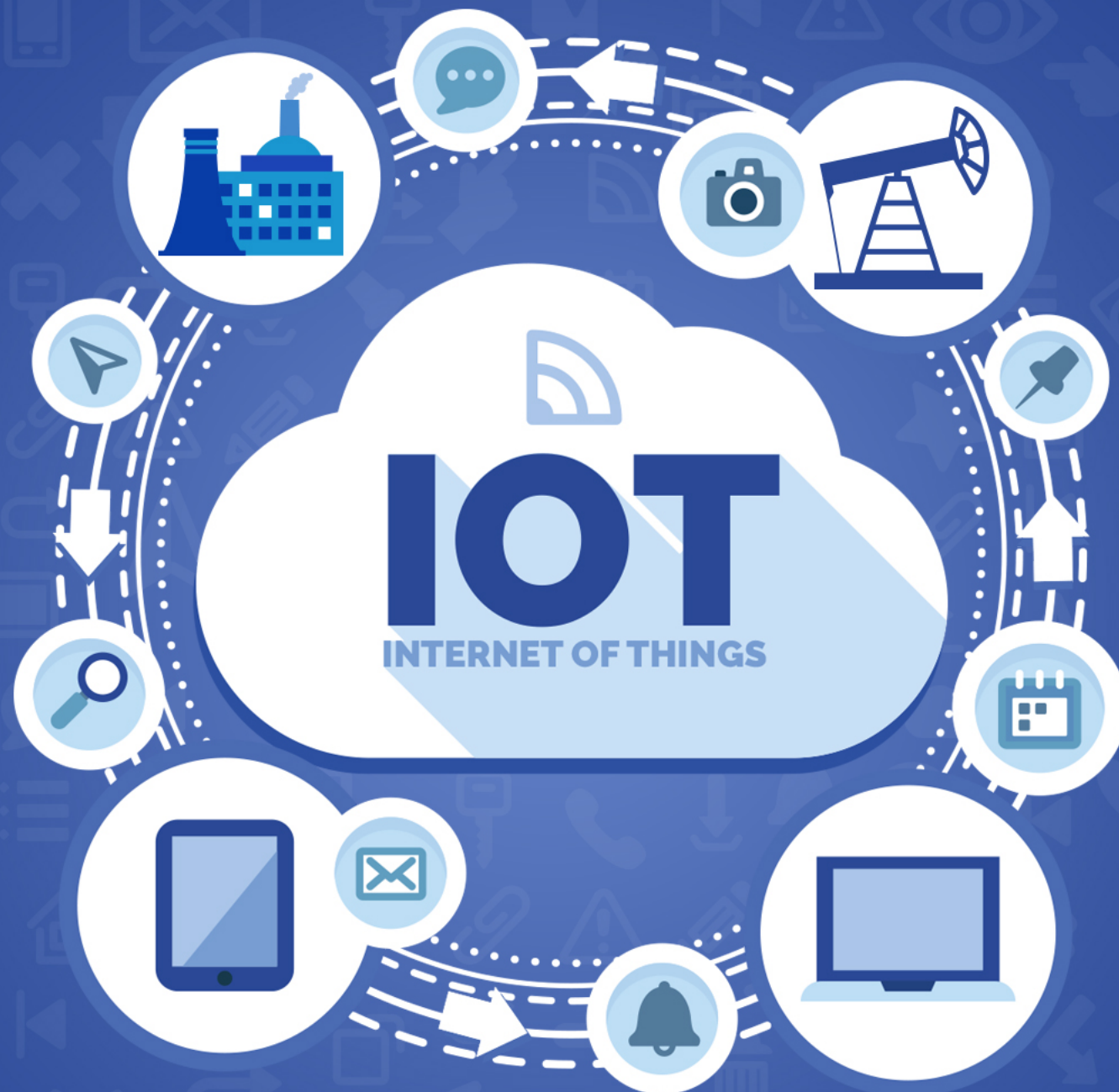
# Cyber Security



Cyber Security depends on  
Three Factors:



# IoT



# What Is Operational Technology (OT)?



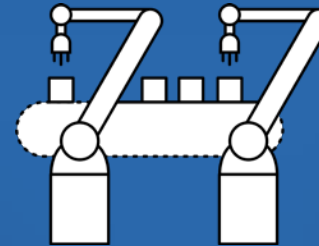
Supervisory control and data acquisition (SCADA)



Telematics



Robotics



Manufacturing execution systems (MES)



Distributed control systems (DCS)



Facilities management/building automation systems



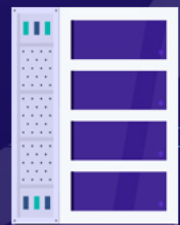
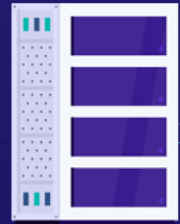
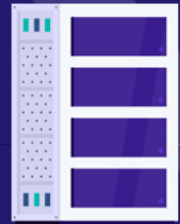
Process control networks (PCN)



Process Level

Bay Level

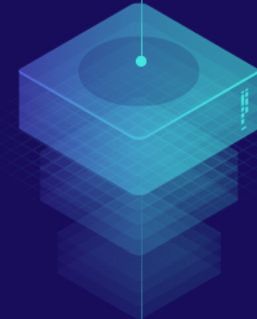
Station Level



Internet

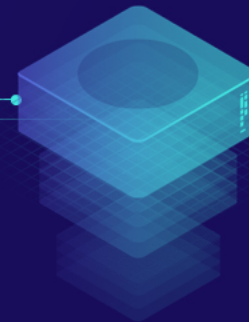


Firewall



Business Network

Firewall



# RISKS



Skills



Connectivity



Design & Function  
Differences



Fast Deployment



Outsourcing



Regulation



Complexity



# Security Types



OT Endpoint Security



OT Network Segmentation



OT Network Monitoring &  
Visibility



OT Security Services

# Human Factor

Most security breaches occur as the result of human intent or error.

(IBM Corp., July, 2013)



## The Human Factor: *How Breaches Occur*

Many elements can contribute to the vulnerability of your organization, however none is more prevalent than the human factor, **which accounts for approximately 80%.**



# Human Factor

The three categories of human error behavior are:



- Skill-based Errors
- Rule-based Errors
- Knowledge-based Errors



# Summary



OTRisks are highly demanding  
and unavoidable without  
Human Resources resilience.



**THANK  
YOU**