



# Tutorial 4

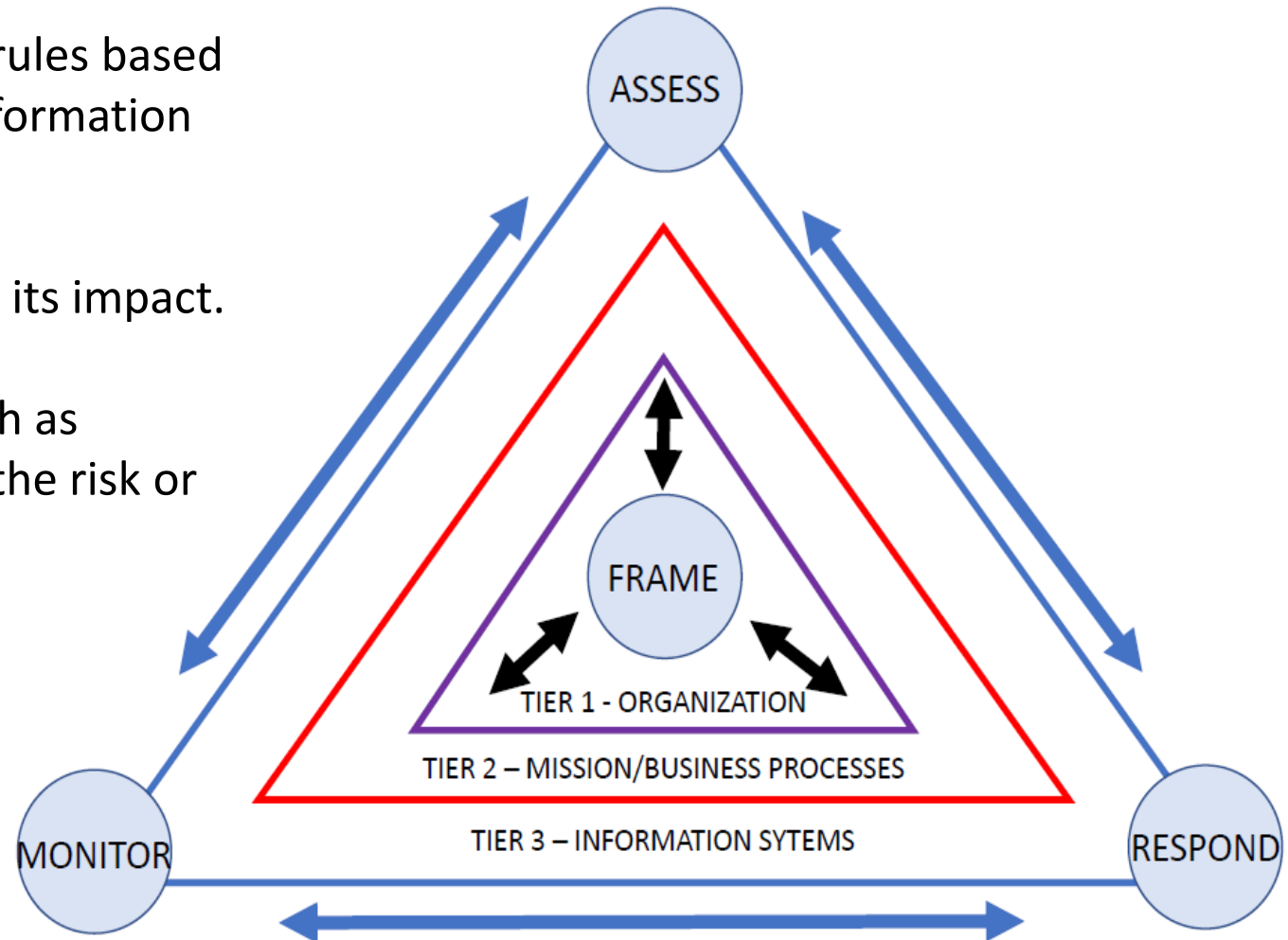
Risk Management and Assessment

# Basics: Risk Management Process

## ➤ **Frame:**

Framework for risk decisions, which contains some rules based on organization, Mission (business process), and Information systems.

1. Monitor the environment to detect the risk and its impact.
2. Assess threats and vulnerabilities.
3. Respond to the risk by selecting one action, such as accepting the risk, avoiding the risk, mitigating the risk or transferring the risk



# Exercise : Water Distribution System

❑ PLC T1 detects the following to send True signal (1) to PLC P1:

1- Is there sufficient water in the tank? 2- Is there water in the pipe? 3- Is there any leakage in the Tank?

❑ PLC P1 detects the following to start the pump:

1- Is there water in the well? 2- Is there a blockage in the pipe? 3- Is there water in the pipe? 4- Do you receive a True signal from PLC T1?

❑ The sensors s1 and s2 are pressure sensors, s3, s4 and s6 are flow sensors and s5 is a level sensor. The output of all sensors is Boolean (0 or 1).

➤ Assuming that the PLCs are MicroLogix 1100s with the vulnerability CVE-2016-0868 Unpatched.

✓ Perform a risk assessment by considering threats and their likely impact (exploiting + affecting).

✓ Calculate the CSSV score for this system.

✓ Perform a risk management framework related to this case for the water treatment organization in Cyprus.

