





EPAL is a public sector company.

It's the oldest (151 years), and largest, water supplier in Portugal.

Since 2015 EPAL manages AdVT.

EPAL/ AdVT deal with water treatment, transport and supply and wastewater collection and treatment.

municipalities (including Lisbon)

3,8M inhabitants

30.000 km²

2.200 infrastructures/ sites

1.000 employees

50 WTP **396** WWTP

234 wps

293 wwps

EPAL

CORPORATE AWARENESS

Together with W-SMART, EPAL has consolidated a methodology for efficient crisis management and organization, while reinforcing its prevention culture. This partnership has contributed to the sharing and learning of international best practices in water management crisis management:



- Crisis Management Training to get new skills;
- Conducting Workshops for sharing experiences;
- Performing Exercises.









MAIN ACCOMPLISHMENTS

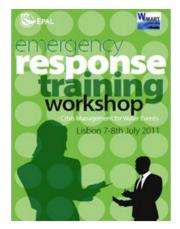
- Promote an organizational culture embraced by all, incorporating the perspectives of "Risk Management", and "Business Continuity";
- Expand risk management methodologies, seeking to mitigate risks and reduce vulnerabilities;
- Raise awareness of all stakeholders involved;
- Increase organizational resilience;
- Crisis management framework definition.

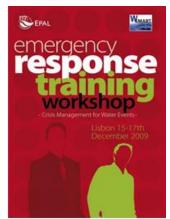
CORPORATE AWARENESS

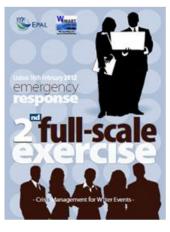


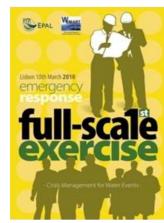
DEVELOPED EXERCISES

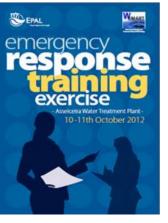
- Pipe burst;
- Water contamination Cryptosporidium;
- Bomb threats;
- Failure in the automatic operating system of the water treatment plant;
- Water contamination –
 Legionella.

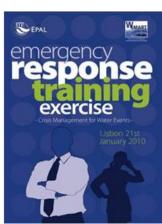












CORPORATE

AWARENESS



LEGIONELLA OUTBREAK- 2014







EXERCISES
WITH THE
MUNICIPALITIES















ANNUAL EXERCISES WITH THE PORTUGUESE ARMY-CYBER



MAIN EVENTS

ROAD TO CRISIS STARTEX



DIA 1

- 1. Cyber Intel
- 2. Campanha de Phishing
 - 3. Scan / Sniffing
- 4. Ataques de Engenharia Social
- 5. Defacement Sites Corporativos
- 6. DDoS contra Rede de Telecom
- 7. Campanha difamatória nas redes sociais



B

ACTIONS ON OBJECTIVES

DIA 2

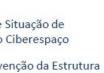
- 8. Ransomware
- 9. DDoS massivos (ICNs)
- 10. Falha geral da Rede Elétrica
- 11. Exploração de Vulnerabilidade
 - 12. Análise Forense Digital
- 13. Ativação de planos (business continuity)
- > Declaração de Situação de Crise Nacional no Ciberespaço
 - > Intervenção da Estrutura Nacional de Ciberdefesa
 - Pedido de Apoio

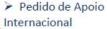


14. Implementação de Planos de ação 15, Utilização indevida de recursos

DIA 3

- 16. Divulgação de informação classificada (data breach)
- 17. Recuperação da Rede de Telecom e das restantes ICNs **Resolução da Crise**













Q Buscar no Twitter

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Entrar

Inscrever-se

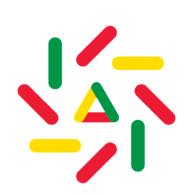


CASCADE2019

@CASCADE_2019

EXERCICIO-EXERCICIO Estrutura Distrital de PC em Évora ativada!!!

#exercisecascade19



Cascade'19

EU Civil Protection Exercise – Portugal 28 May – 1 June





CRISIS
COMMUNICATION

MEDIA TRAINING



Success is a journey not a destination. The doing is often more important than the outcome

Arthur Ashe







Sustainability







PART I - GOAL DEFINITION (using verbs)

Improve

Calibrate

Eliminate

Test

Check

nderstand

Analyze

Examine

Decide

Ensure

Communicate

Control

Validate

Change

Demonstrate

Restore

FULL SCALE EXERCISE



Scope and

Characteristics – Full

Scale - Semi Live - Field Exercise

Threats Categories (maximum 2/3)

Malfunction

Natural disasters

Intentional

Interdependencies

Accidental



Workers involved

Stakeholders involved

Information

Environment

Level of surprise regarding

Reputational **Quantity/Quality** events

FULL SCALE **EXERCISE**



PART II SCENARIO DEVELOPMENT



Event definition

Align scenarios with objectives, scope/borders and threats **Define the main** inputs, based on scenarios as real as possible

Assets

Teams

FULL SCALE EXERCISE



FULL SCALE

ASSETS

EVENTS

THREATS

Malfunction 3

THREATS

Natural disasters 1

Intentional 4

Interdependencies 7

Accidental 5

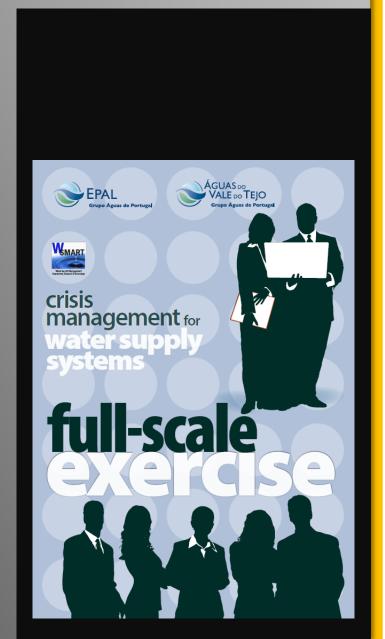


SCOPE/

CARACTERISTICS

GOALS

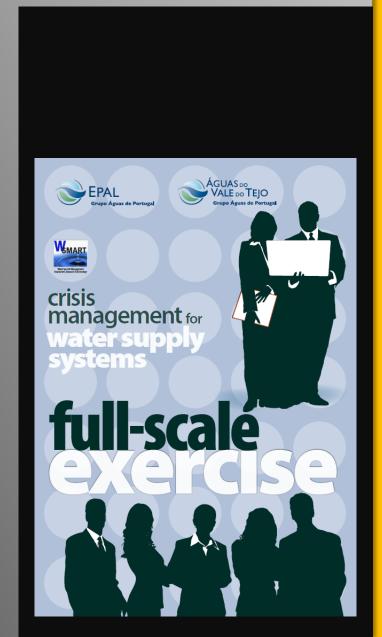




EXAMPLES

- 1. Test the internal crisis communication (SIRESP, internal communications lines and usual lines);
- 2. Evaluate the communication plan, internaly and between departments;
- 3. Improve the external communications (media, social media, municipalities, supplyers);
- 4. Test the facilities operations in an unusual mode manual;
- 5. Validate and improve the crisis management procedures (eg. strikes situations, chemicals storage, energy shortage, ...) ...





- → Water Quality Incident during the upcoming Pope's visit and possibly during a fuel shortage;
- → An occurrence of Turbidity by increasing water velocity in a particular part of the system, by increased consumption, affecting Lisbon;
 - → A second water quality event occurs, in the Middle Tagus, which will involve the support of the AdVT system;
 - → Customer contacts to the Contact Center;
- → Involvement of external entities to evaluate, in the situation of the Middle Tagus;
 - → Possible involvement of a larger municipality.



Thank You!

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