ROLE OF CERT-GOV-MD and cooperation at national level

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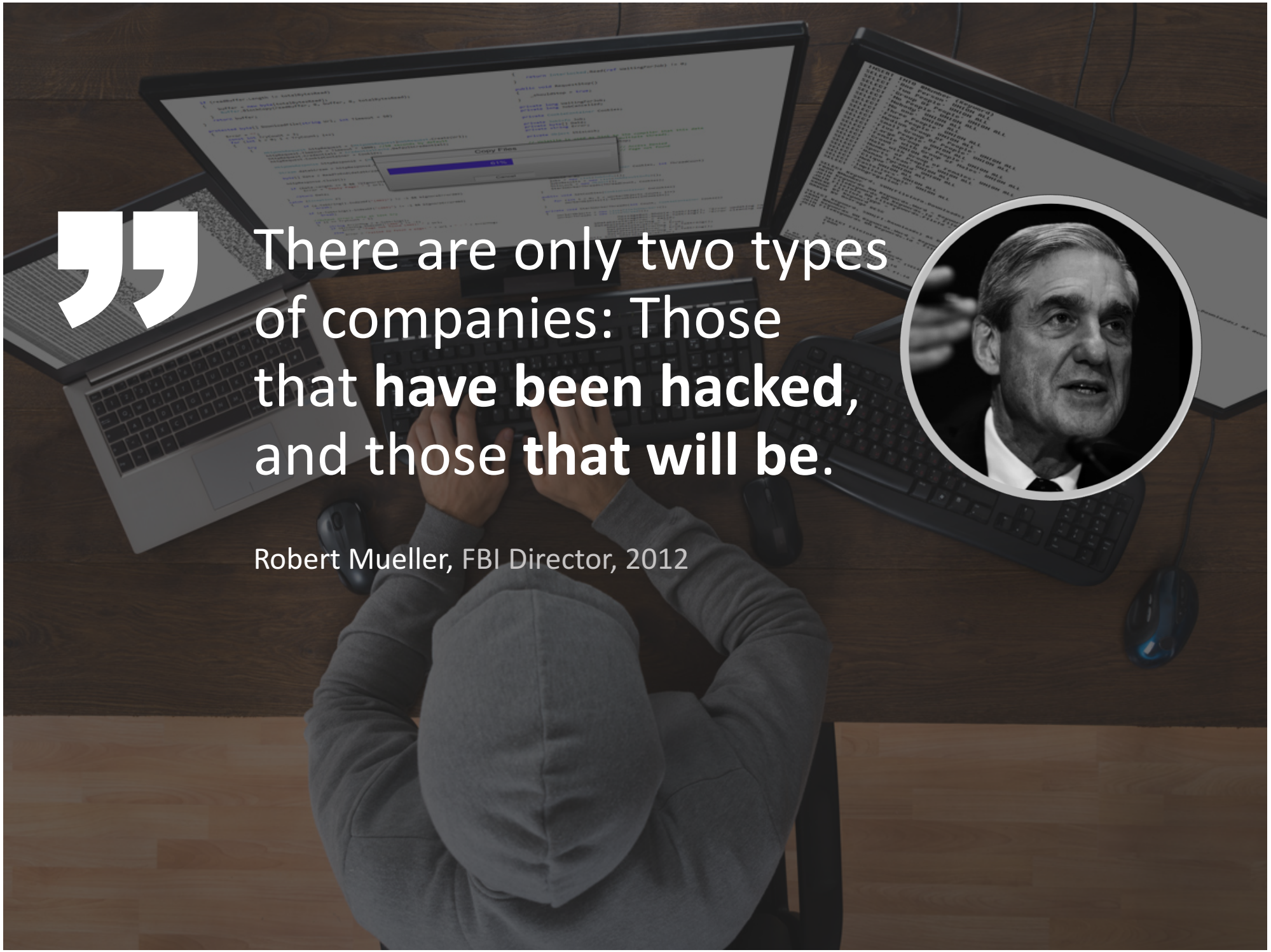
AGENDA

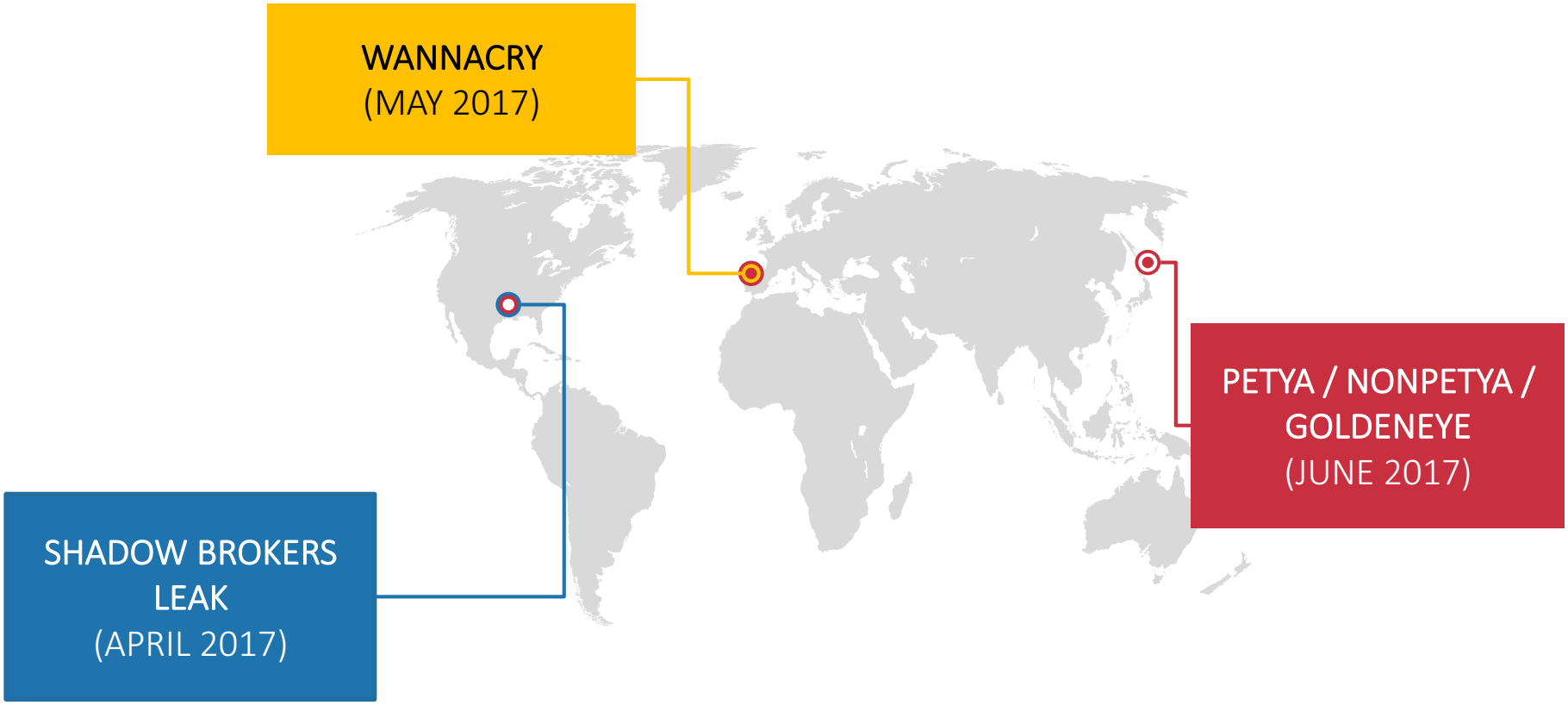
1. Introduction
2. CERT-GOV-MD: organization and operational capacities
3. CYBERSECURITY INCIDENTS: CHALLENGES, CURRENT SITUATION AND PAST ATTACKS
4. Future: Cybersecurity in moldova
5. CONCLUSIONS

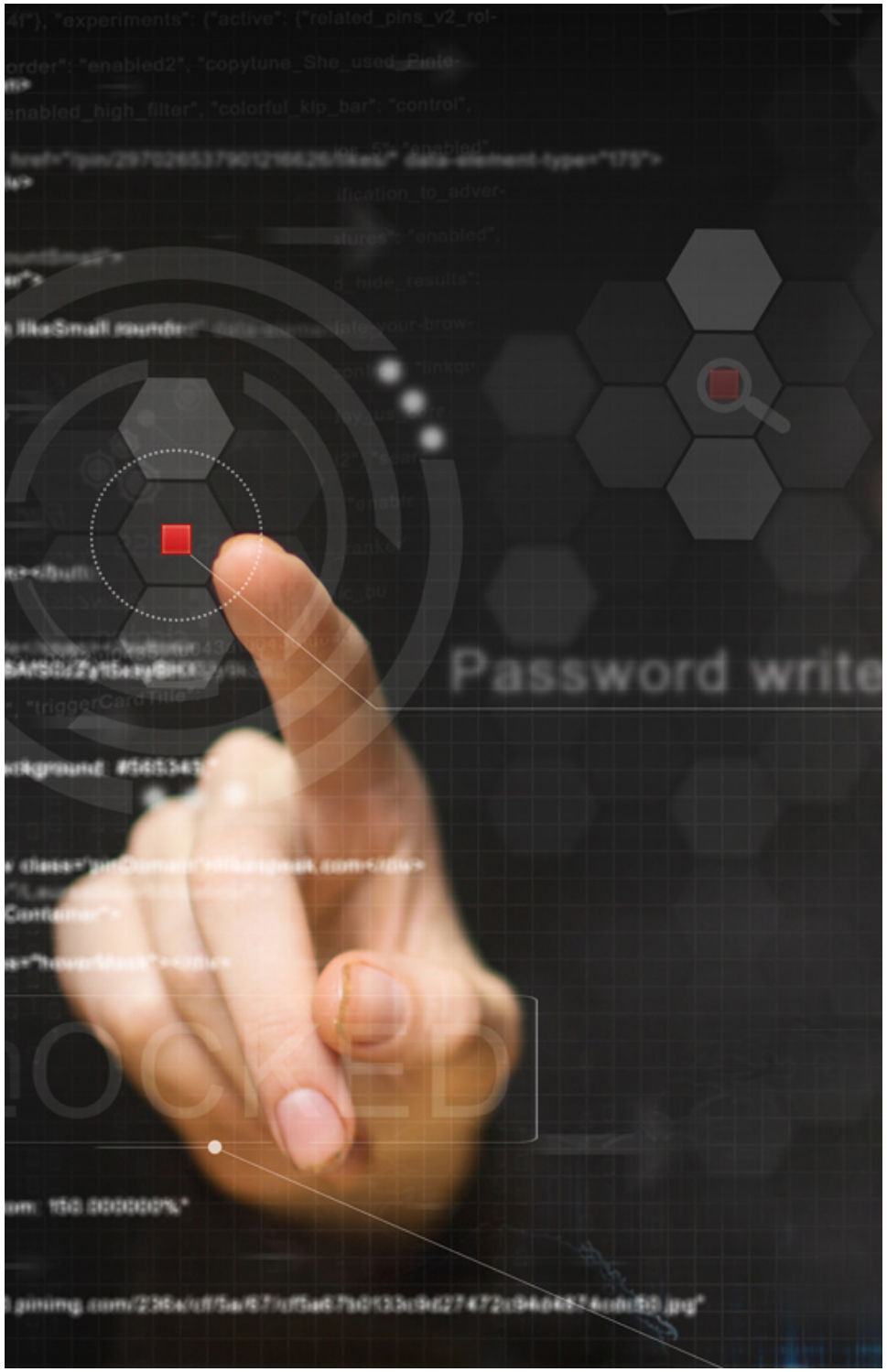

There are only two types of companies: Those that **have been hacked**, and those **that will be**.
Robert Mueller, FBI Director, 2012

Introduction

CYBER THREATS ARE INTERCONNECTED

CYBER THREATS 2017





SHADOW BROKERS LEAK

August 2016

- Shadow brokers group claimed to obtain NSA spy tools.

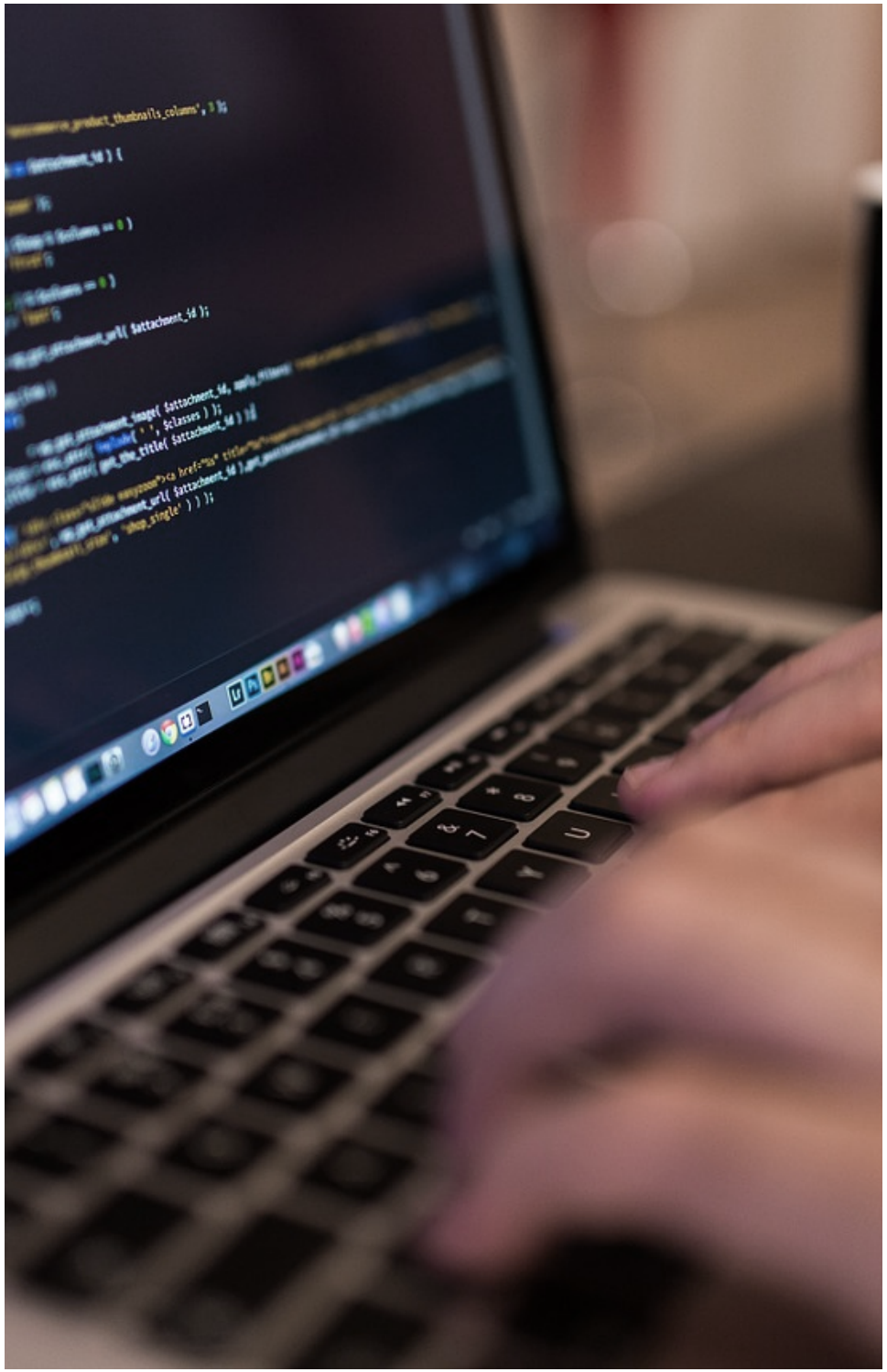
April 2017

- The most significant leak of spy exploits done by the group.

April's leak led to the most serious consequences.

WANNACRY

- On **May 12** a strain of ransomware called WannaCry spread around the world.
- The ransomware used leaked by Shadows Brokers exploit to attack the targets.



PETYA / NONPETYA / GOLDENEYE

- A month or so after WannaCry, another wave of ransomware infections that partially leveraged Shadow Brokers Windows exploits hit targets worldwide

WHY THIS MATTERS TO YOU

- Growing space with rapid expansion
  - Across all sectors: individuals, commerce, governments
  - Growing pervasiveness in everything we do
- Many threats
- Cyber Security is an unclear concept
  - Considerable uncertainty, broad scope, and ever-changing dimensions
  - Cyber security definitions vary widely and lack true conformity
- Cyber is a chaotic and ungoverned environment
  - Increasing tension between governments, individuals, private enterprises, commence.
  - What is cyber defense?
- Early stages of cyber expansion
  - Technological advancement
  - Fast and intense competition
  - An uncertain future of the cyber domain, the internet and more

THE CYBER SECURITY CHALLENGE…

When…

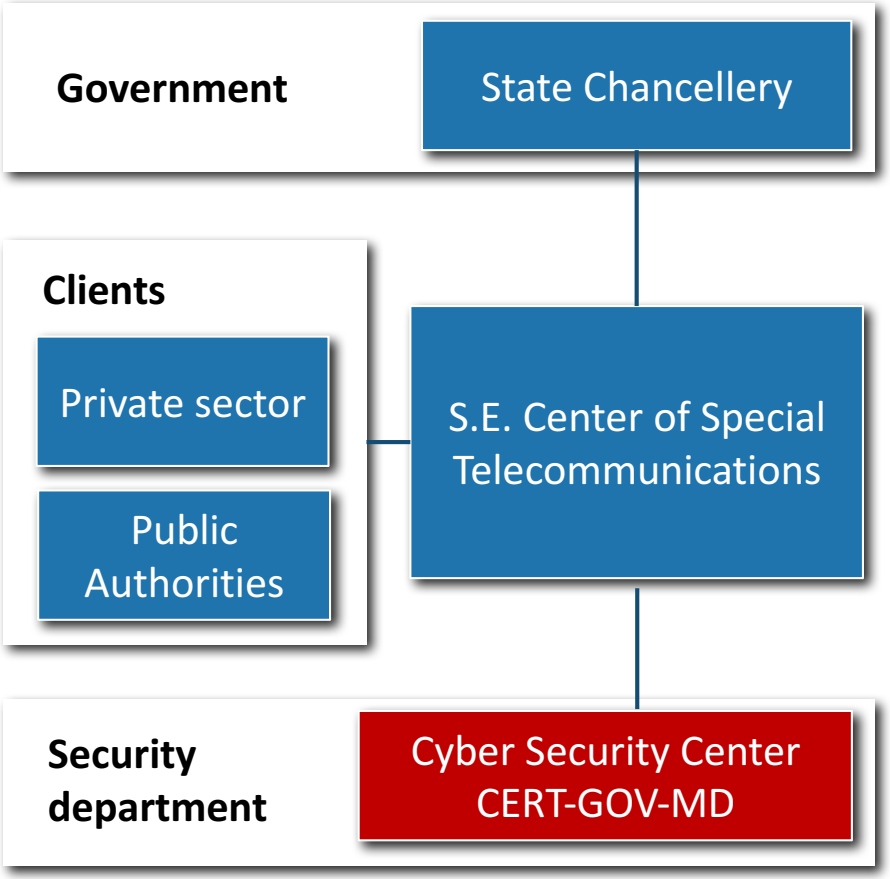
- In the Cyber world, security was an afterthought
- The Cyber world lacks a single central cyber architect
- The Cyber world is a system of insecure systems
- The Cyber world is not static but constantly evolving
- Innovation is constant, and highly unpredictable

CERT-GOV-MD

ORGANISATION AND OPERATIONAL CAPACITIES

WHO WE ARE?

SUBORDINATION HIERARCHY



FACTS

2010	Established by Government decision № nr. 746 of 18.08.2010
2013	Implemented ISO 27001
2014	CERT-GOV-MD became accredited by Trusted Introducer
2016	FIRST membership

Benefits of CERT-GOV-MD

- Serve as a trusted point of contact
- Develop an infrastructure for coordinating response
- Develop a capability to support incident reporting
- Conduct incident, vulnerability & artifact analysis
- Participate in cyber watch functions
- Help organizations to develop their own incident management capabilities
- Provide language translation services
- Make security best practices & guidance available
- Provide awareness, education & trainings

THREATS

CYBERSECURITY

THREATS

Threats in Cyberspace

INFORMATION & ABUSE

- Targeted government control and influence of citizens
- Propaganda
- Consciously communicating false information
- State espionage
- Data breach
- Identity theft
- Hackers
- Internet crimes, encouraging sedition
- Terrorism

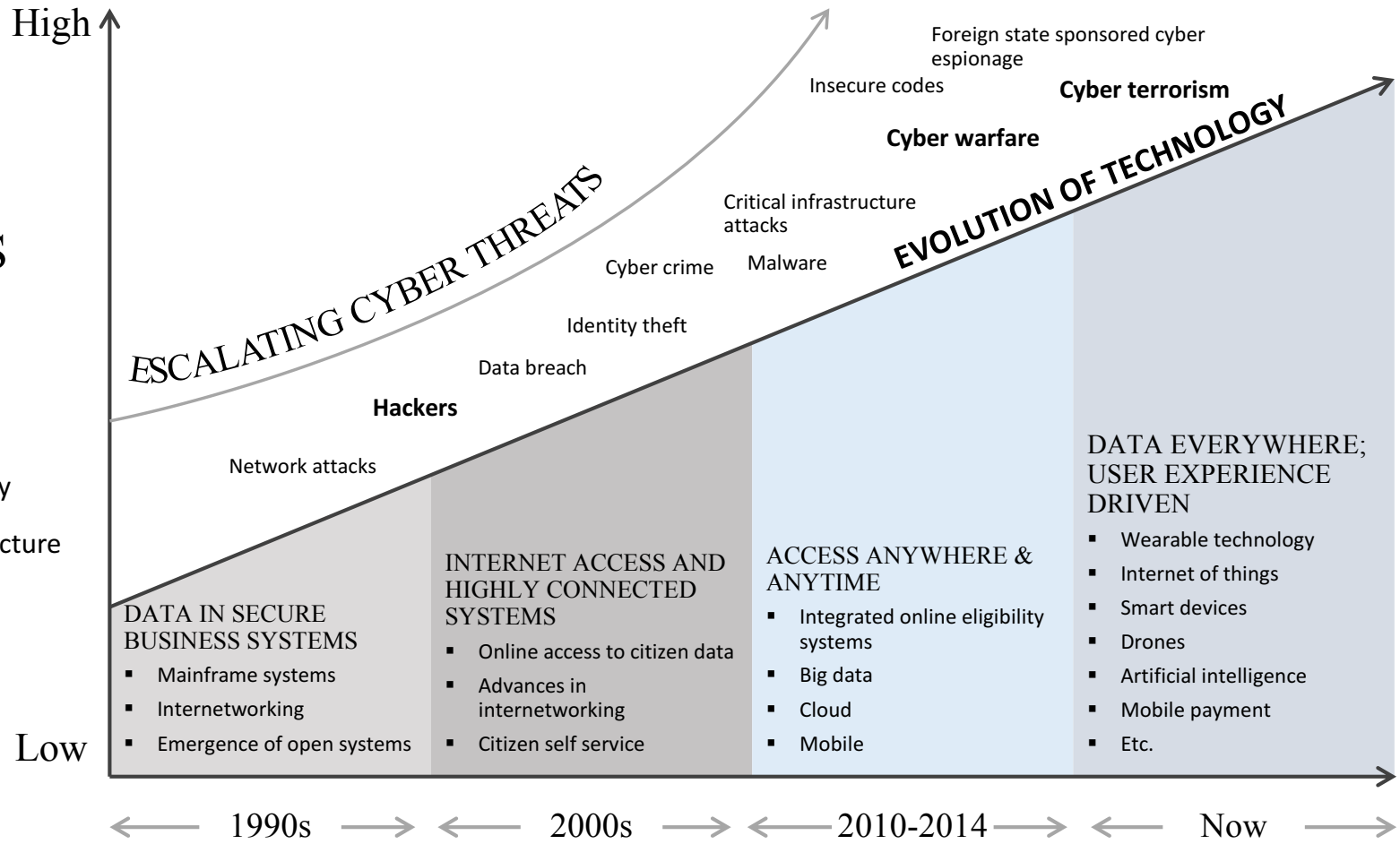
THREATS

Threats are Becoming More Complex

THREATS

BUSINESS IMPACT:

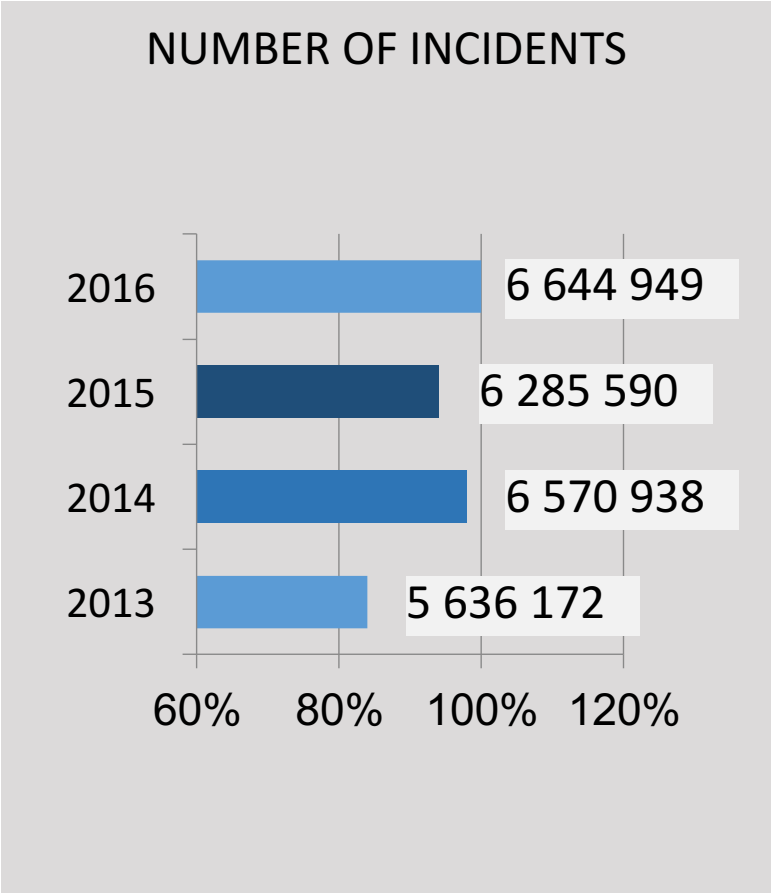
- Citizen trust
- Cost to protect
- Legal/ regulatory
- Critical infrastructure

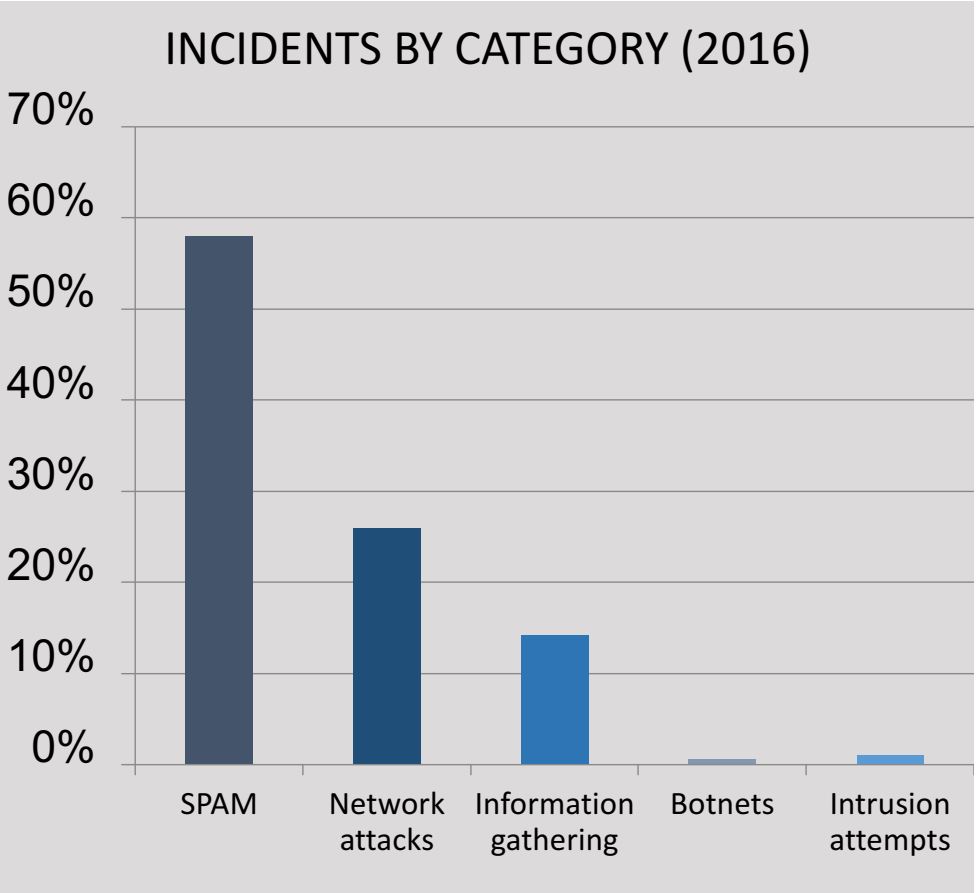


CYBERSECURITY INCIDENTS

CHALLENGES, CURRENT SITUATION AND PAST ATTACKS

CYBER INCIDENTS IN GOVERMENTAL SECTOR





THREATS

3 882 529 unsolicited emails blocked as of 2016

SPAM

Seems legitimate and are sent to an email account

Many email accounts have spam filtering

Contains often dangerous links (to download) or invoices for alleged online orders

Can also be sent on social networks or apps

THREATS

57 575 malware blocked as of 2016

ATTACKER

Various new forms of malware appear on the internet every day.

TROJANS & WORMS

ARE SENT VIA INFECTED EMAILS

Can transfer sensitive data such as passwords, banking information, personal data

VICTIM

Nest undetected in computer systems or creep in during downloads

THREATS

3 678 Botnets infections detected

ATTACKER

Networks consisting of several computers

BOTNETS CONTROLERS

INFECTED

Can send infected and dangerous (spam) emails

Can send infected and dangerous (spam) emails

TARGET

Can attacks all IT systems

THREATS

124 575 Distributed Denial-of-service (DOS) attacks stopped

ATTACKER

Networks consisting of several computers

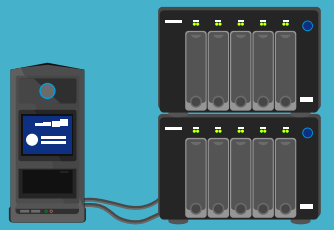
BOTNETS CONTROLERS

Are also used as a distraction while malicious software is being installed

INFECTED

TARGET

Block internet services



It purpose is to Interrupt web servers which then causes a mass of data packets to be sent to the server

CAPACITY BUILDING

Cyber Security Trainings and Workshops

Joint educational activities

INFORMATION SECURITY AWARENESS

CERT-GOV-MD's awareness activities

POWER OF PARTNERS

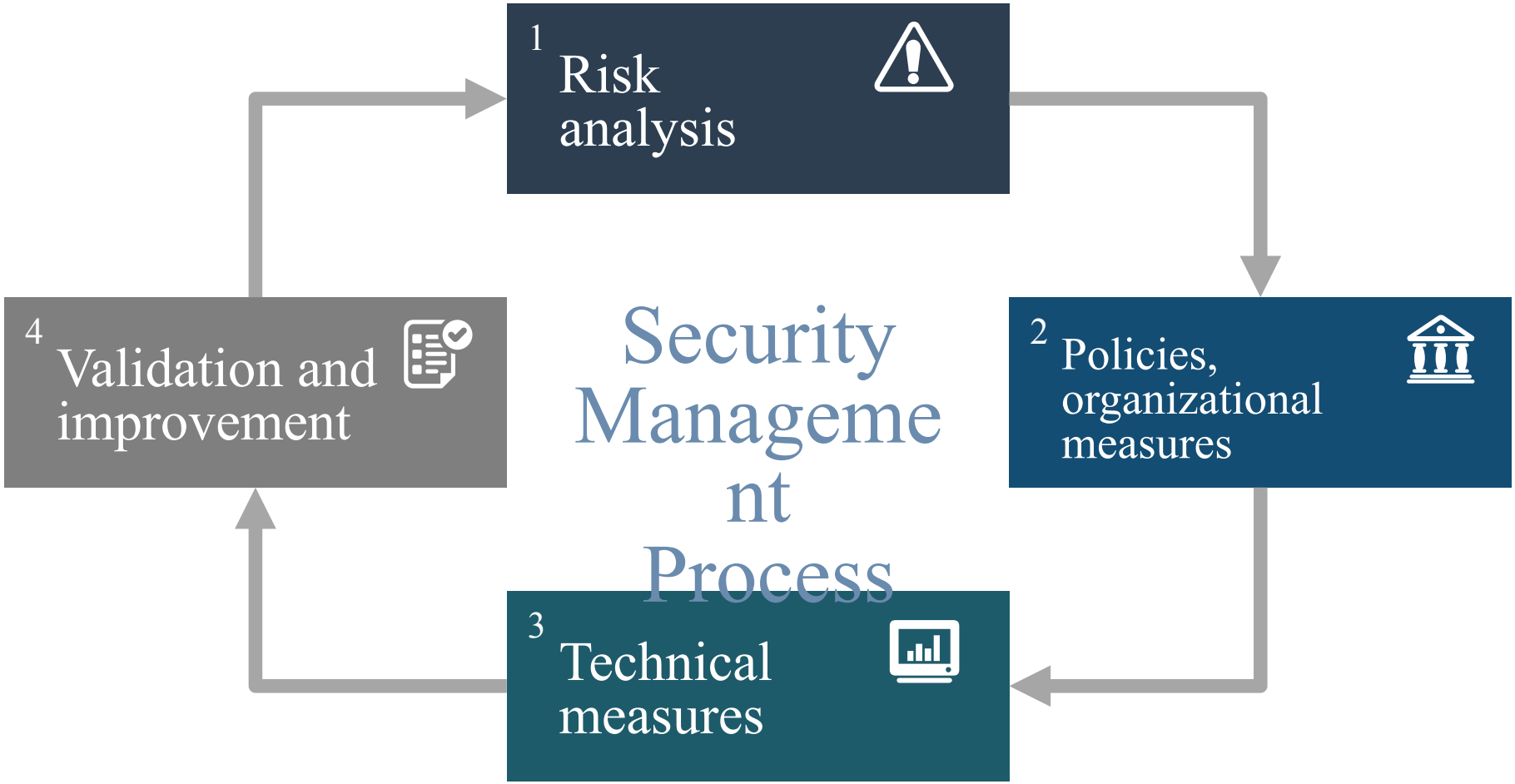
Working together to ensure high level of cybersecurity

FUTURE

CYBERSECURITY IN MOLDOVA

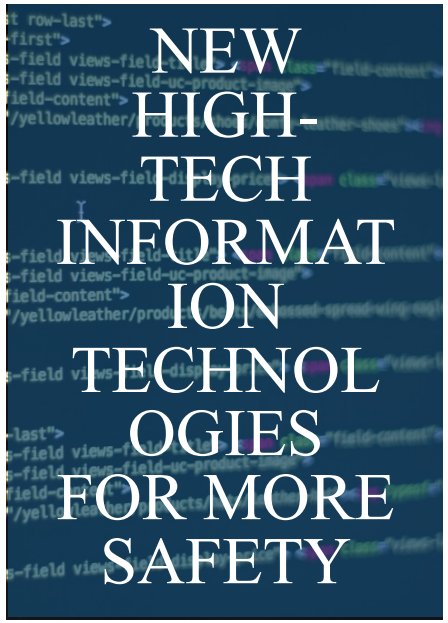
SECURITY

Continuous Steps of a Security Management Process

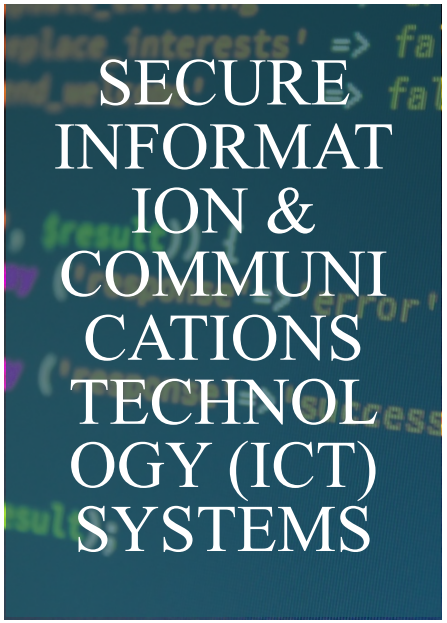


FUTURE

New Research Program of the Government with Four Focus Areas



New encryption capabilities and security measures



Security measures and solutions for networked systems

Protection of critical infrastructures and networked industrial plants

More control over citizens' personal data on the Internet

CONCLUSIONS

CONCLUSION

Cyber security is a **global problem** that has to be addressed globally by all governments jointly;

No government can fight cybercrime or secure its cyberspace in isolation;

International cooperation is essential to securing cyberspace;

It is **not a technology problem** that can be ‘solved’; **it is a risk to be managed** by a combination of defensive technology.

THANK YOU!

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