

CYBER SECURITY

BANGKOK

23.11.2015

FOCUS OF THE CONFERENCE

CRITICAL INFRASTRUCTURE PROTECTION
SPECIAL FOCUS ON CYBERSECURITY DIMENSION
CURRENT DEVELOPMENTS
RESPONSE TO THREATS
TECHNICAL RESPONSE
STRATEGY AND POLICY

FOCUS OF THE CONFERENCE

CRITICAL INFORMATION INFRASTRUCTURE PROTECTION (CIIP)
VS
CRITICAL INFRASTRUCTURE PROTECTION (CIP)

DEVELOPMENTS WITH
IMPACT ON NCI

THE CHALLENGES WILL INCREASE

2014

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**TECHNICAL INNOVATIONS CONTINUE
AMAZING OPPORTUNITIES FOR SOCIETY
ESPECIALLY WITH REGARD TO ARTIFICIAL INTELLIGENCE**

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**AI HAS THE POTENTIAL TO BE A GAME CHANGER
SIGNIFICANT DEVELOPMENTS
„SECOND HALF OF THE CHESS BOARD“**

THE CHALLENGES WILL INCREASE

„NAME YOUR REWARD“

„OH EMPEROR, MY WISHES ARE SIMPLE.
GIVE ME ONE GRAIN OF RICE FOR THE FIRST
SQUARE OF THE CHESSBOARD AND DOUBLE
IT EVERY NEXT FIELD“

THE CHALLENGES WILL INCREASE

**EXAMPLE: SELF DRIVING CARS
VARIOUS TEST PROJECTS**

**NOT A SINGLE ACCIDENT CAUSED BY SELF
DRIVING CARS IN GOOGLES PROJECT**

THIS WILL HAVE AN IMPACT ON ONE NCI (TRANSPORTATION)

TRANSPORTATION

OBVIOUSLY THERE IS A DEBATE ABOUT CYBERSECURITY
THREATS OF HACKING ATTACKS

RECENT RESEARCHES SHOW THE POTENTIAL
COUNTER MEASURES NEED TO BE DISCUSSED
BUT THE DISCUSSION SHOULD NOT IGNORE
REMAINING PHYSICAL VULNERABILITIES

TRANSPORTATION

BUT FOR SOCIETIES IT IS NECESSARY LOOK
BEYOND OBVIOUS SECURITY RISKS
MAJOR IMPACT ON SOCIETIES IN GENERAL
AND JOBS

SMART CITY

SMART CITIES OFFER INCREDIBLE OPPORTUNITES
INCREASING USE OF ICT WILL ALLOW FURTHER GROWTH
ENERGY PRODUCTION CAN BE ARRANGED LOCALLY
RENEWABLE ENERGY CONCEPTS

SMART CITY / TRAFFIC CONTROL

CYBER RISK – DOCUMENTED CASES

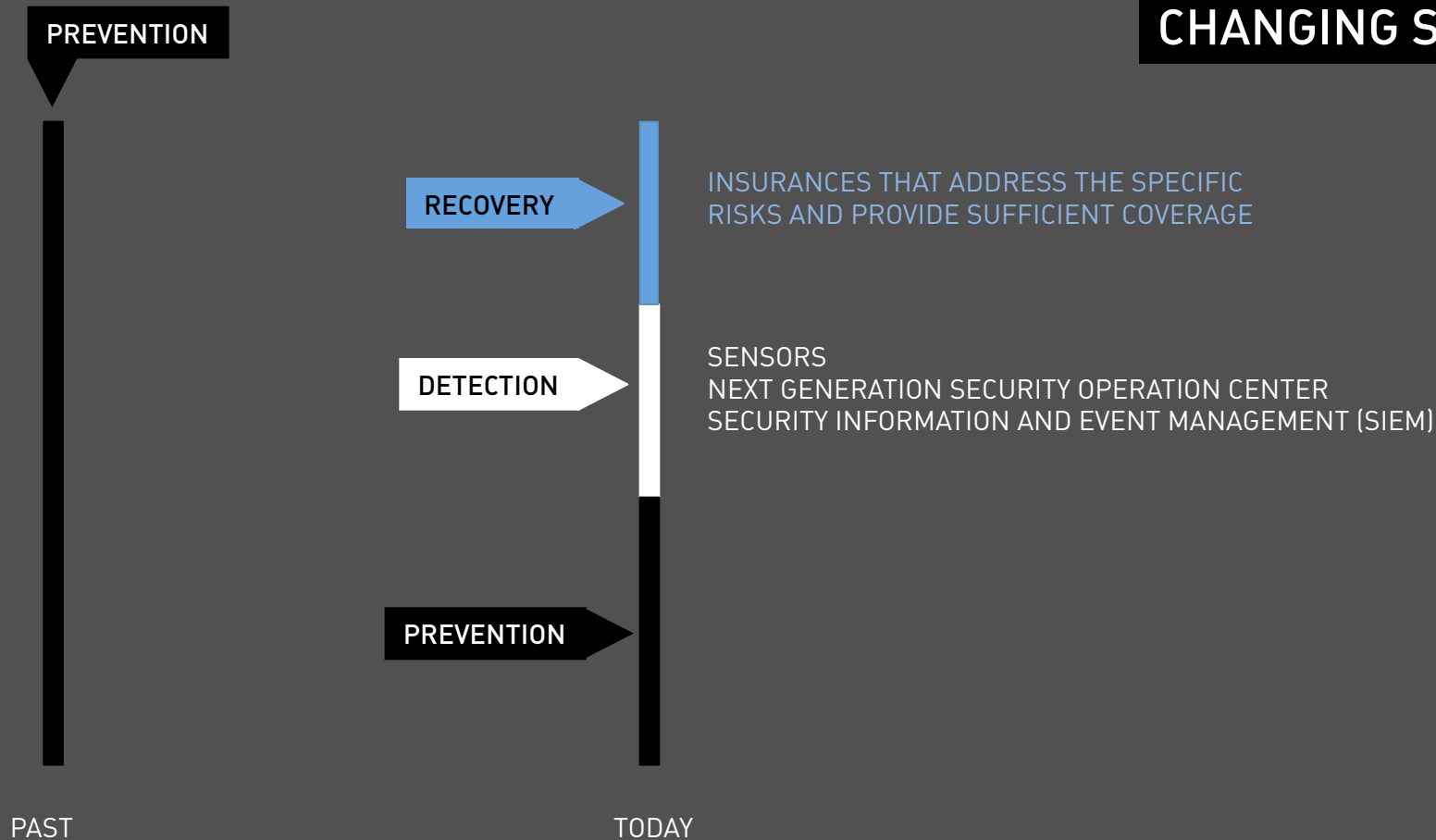
CHALLENGES OF CYBER ATTACKS AGAINST CRITICAL INFRASTRUCTURE

QUANTITY OF ATTACKS

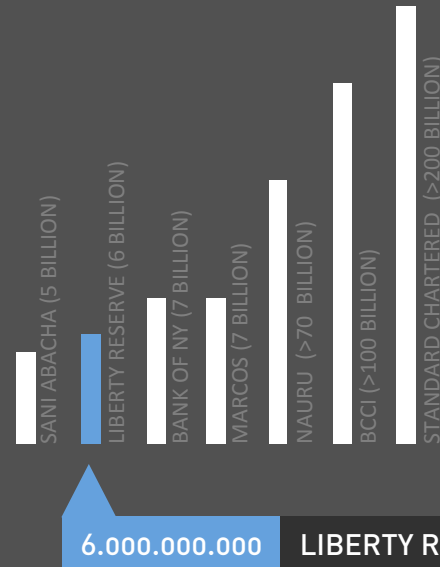
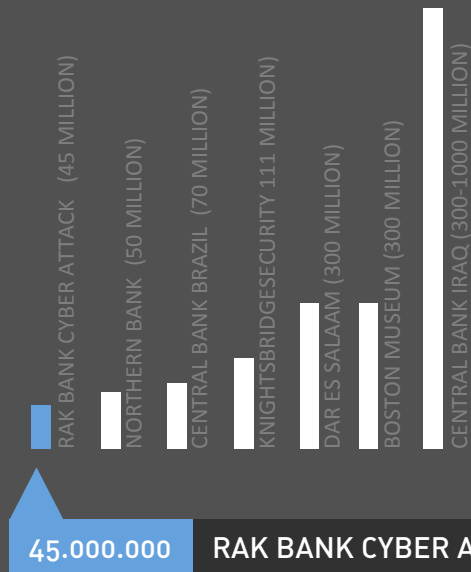
**CYBERSECURITY IS A MAJOR CONCERN
BASICALLY ALL BUSINESSES THAT USE ICT ARE
VULNERABLE
IMPACT ON THE STRATEGY (PREVENTION VS
RESPONSE)**

**HIGHLY RELEVANT FOR NCI PROVIDER
INCREASING USE OF ICT AND DIGITALIZATION**

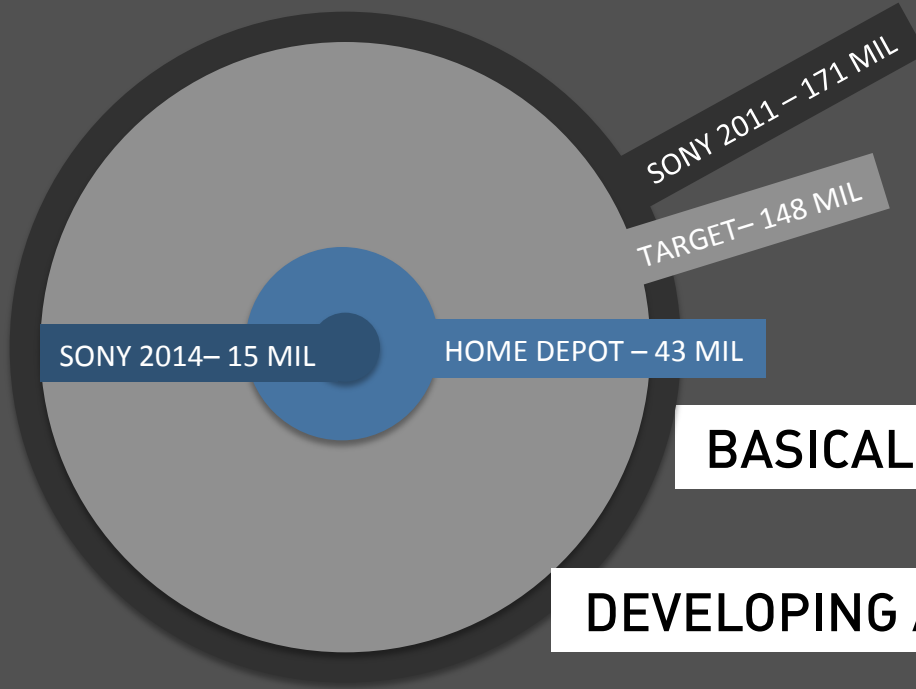
CHANGING SOLUTIONS



CYBERCRIME HAS „GROWN UP“



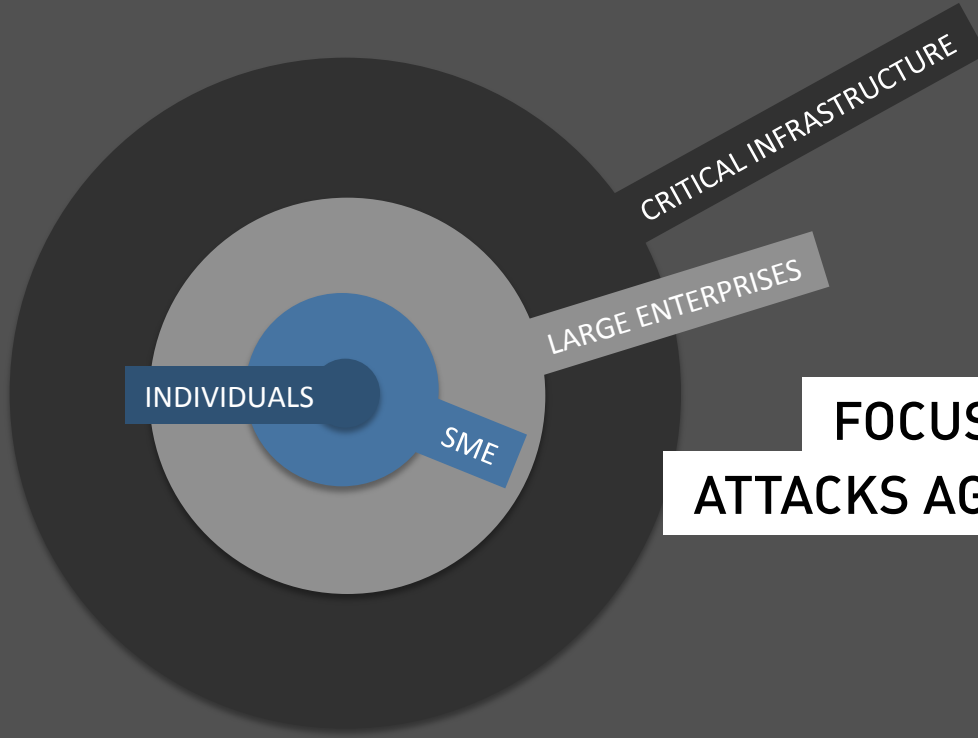
INCREASING LOSSES



LOSSES ARE INCREASING
BASICALLY ALL BUSINESSES THAT USE ICT ARE
VULNERABLE

DEVELOPING A RESPONSE STRATEGY CHALLENGING

IMPACT COMPARISON



FOCUS ON INDIVIDUALS AND BUSINESSES
ATTACKS AGAINST NCI COULD BE MORE SEVERE

RELEVANCE FOR GOVERNMENT

RELEVANCE FOR GOVERNMENTS ?

„ISN'T THIS A PRIVATE SECTOR PROBLEM“?

„SHOULDN'T GOVERNMENTS FOCUS ON CRIME“?

GOVERNMENTS USE ICT

NEGATIVE EXAMPLE: GERMANY EXCLUDED

ADMINISTRATION FROM BINDING

CYBERSECURITY LEGISLATION

RELEVANCE FOR GOVERNMENT

CYBER ATTACKS AGAINST GOVERNMENTS

CONCERN FOR DECADES

INCREASING DEPENDENCE ON ICT

ALREADY IN THE PAST ATTACKS DID

FOCUS ON NCI

HARMONIZATION OF TECHNOLOGY

RELEVANCE OF TCP/IP IS NOT LIMITED TO „THE INTERNET“

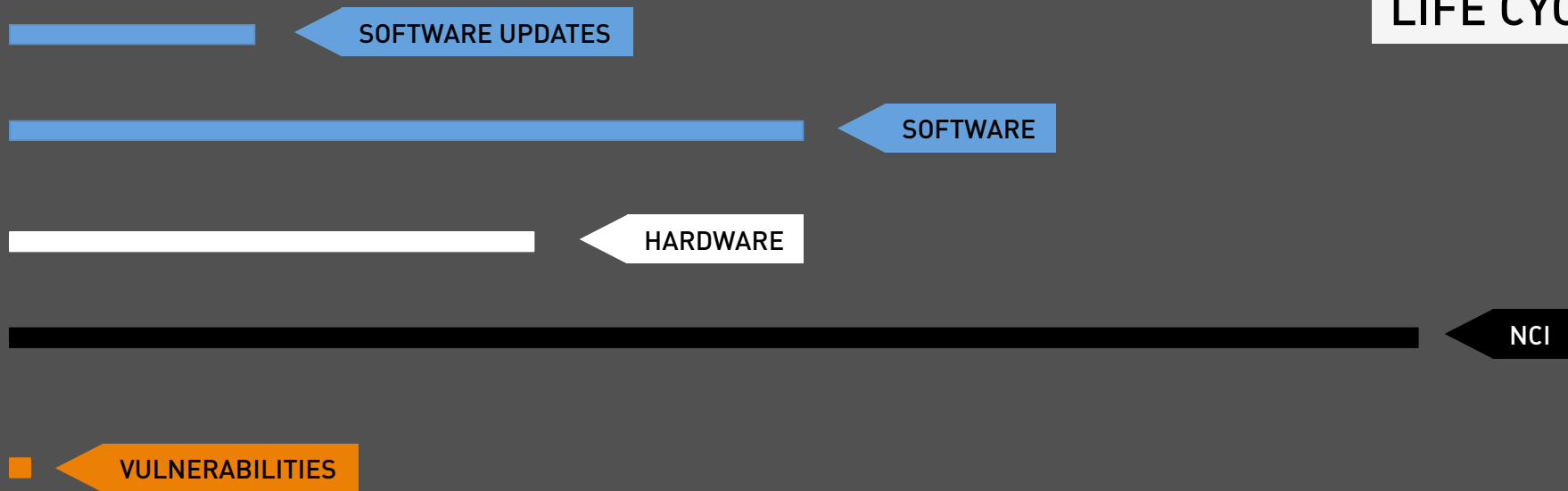
DE FACTO STANDARD FOR DATA EXCHANGE
USED IN PLANES, CARS, FACTORY NETWORKS

OPERATING SYSTEMS ARE TODAY DEVELOPED FOR
DIFFERENT ENVIRONMENTS

IMPORT OF RISKS INTO
THE NCI ENVIRONMENT

NEED TO PAY ATTENTION TO SPECIFITIES OF NCI

LIFE CYCLE



RELEVANCE OF AN ASSESSMENT OF RISK EXPOSURE AND CAPACITIES

RELEVANCE OF ASSESSMENT

MICROSOFT DOES NOT PROVIDE SECURITY UPDATES
FOR WINDOWS XP ANYMORE

HOW MANY NCI COMPUTER SYSTEMS
STILL RUN WINDOWS XP?

RELEVANCE OF ASSESSMENT

STUXNET CLEARLY DISCLOSED
THE VULNERABILITY OF SCADA DEVICES
OPERATORS PROVIDED PATCHES

HOW MANY NCI FACILITIES
STILL USE SCADA DEVICES THAT
HAVE NOT BEEN PATCHED?

GOVERNMENT RESPONSE

QUANTITY

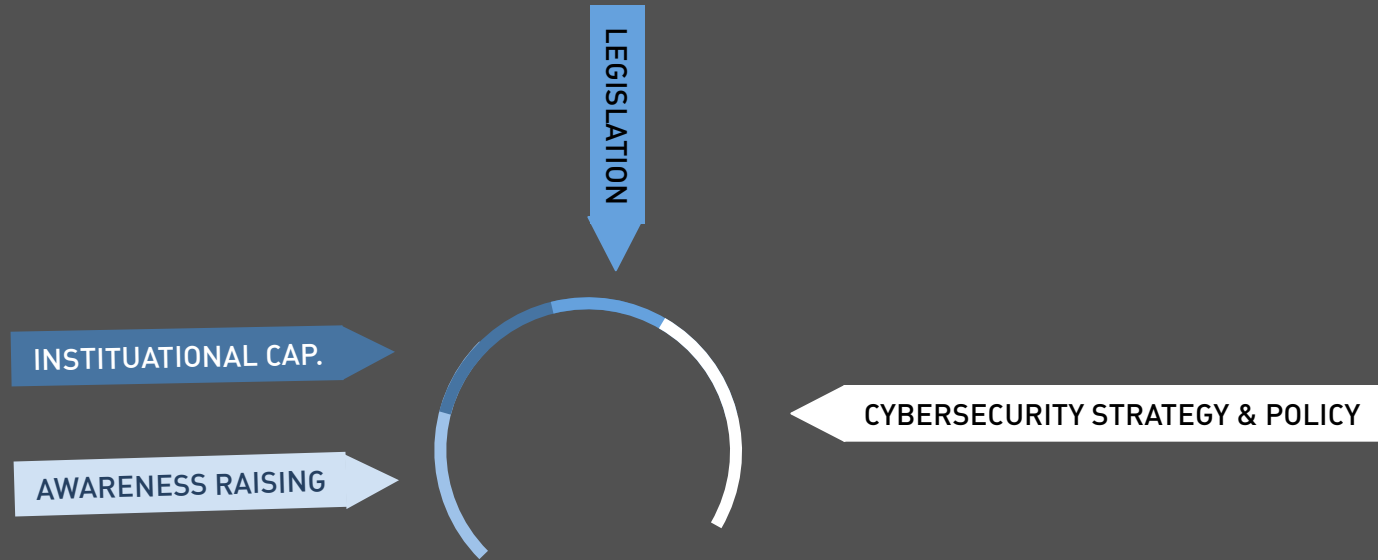
GOVERNMENTS STRUGGLE WITH RESPONSE
LESS RESOURCES – COMPETITION FOR BEST PEOPLE
DESPITE IMPROVEMENTS LACK OF STRATEGY
LACK OF AWARENESS AT TOP LEVEL
LIMITED RISK ASSESSMENTS
OUTDATED POLICIES AND LEGISLATION

QUALITY

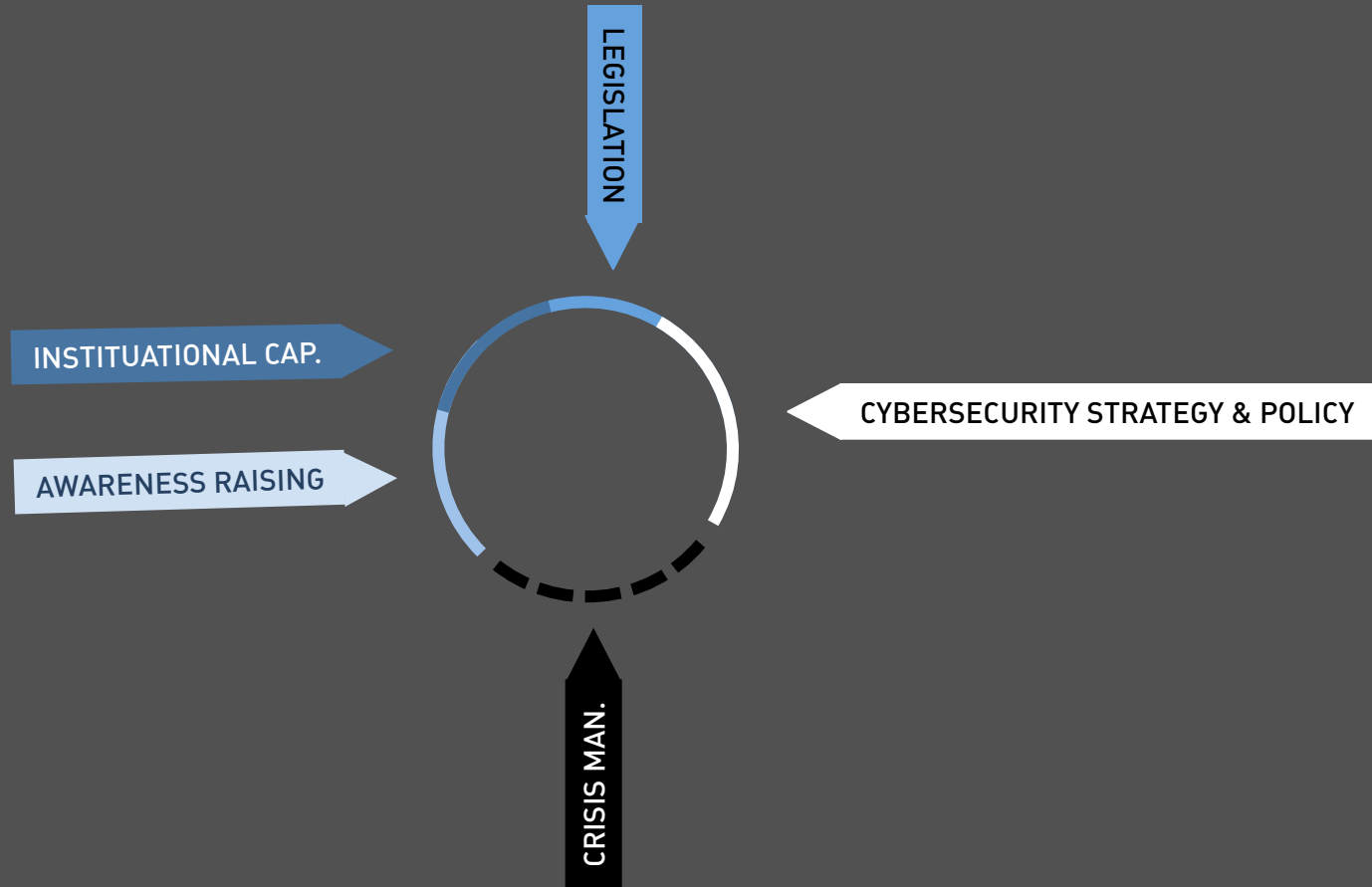
**CYBER ATTACKS BECOME MORE
SOPHISTICATED
ADVANCED PERSISTENT THREAT
CHALLENGE WITH REGARD TO RECOVERY**

**LONG LASTING REMOVAL
AND RECOVERY CAN BE A PROBLEM
WHEN IT COMES TO NCI**

GOVERNMENT ACTION



GOVERNMENT ACTION



CONCRETE MEASURES

BUILD YOUR DEFENSE STRATEGY ON BEST PRACTICES

HAVE EMERGENCY PLANS IN PLACE

DO DRILLS

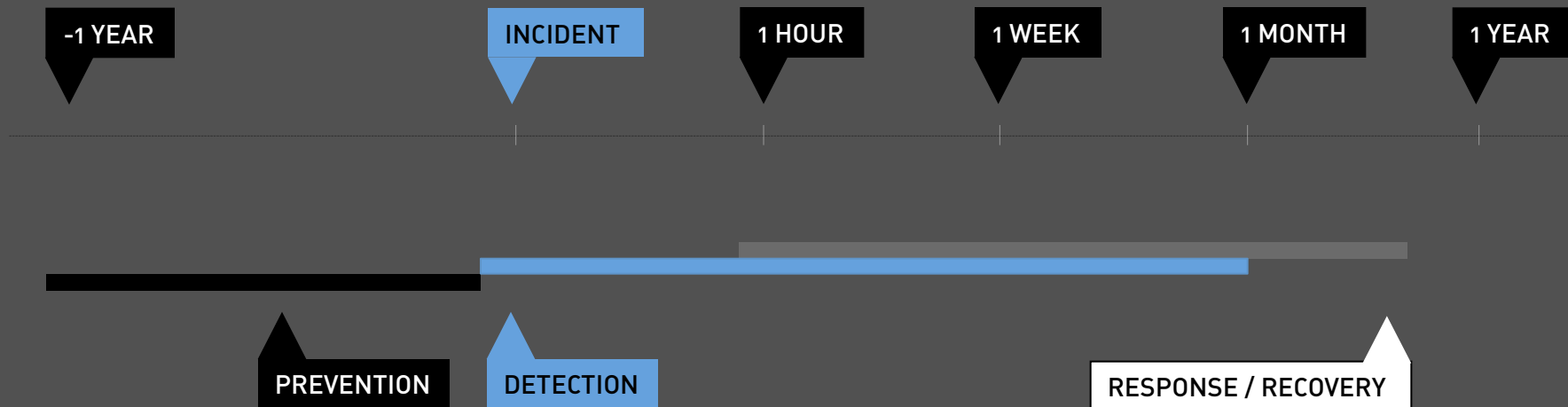
ALWAYS REVIEW

ACTIONABLE THREAT INTELLIGENCE

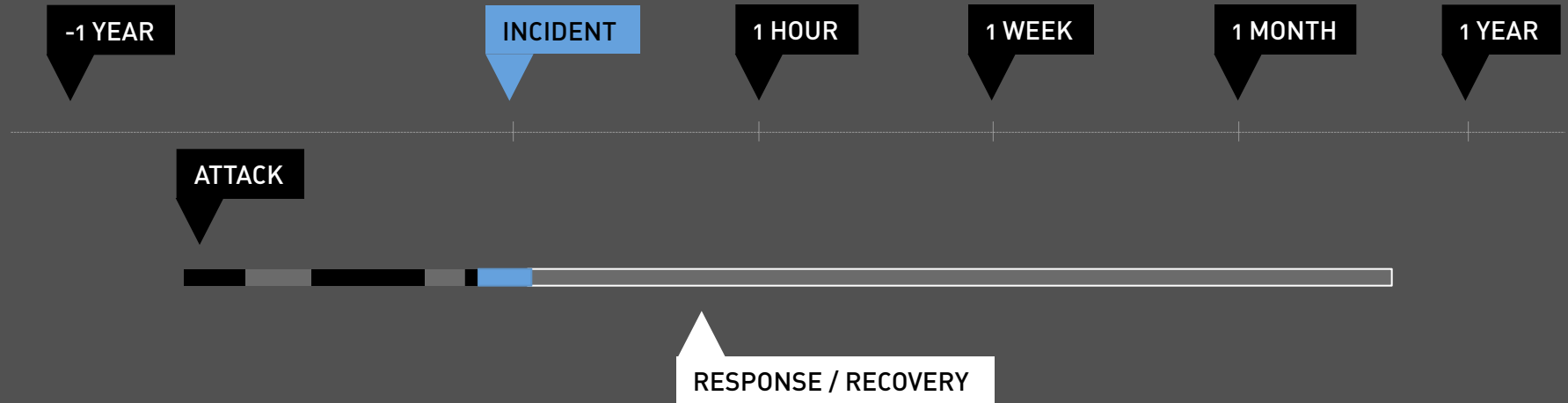
FIRST HOUR / FIRST DAY / FIRST WEEK



FIRST HOUR / FIRST DAY / FIRST WEEK



FIRST HOUR / FIRST DAY / FIRST WEEK



FIRST HOUR

UNCERTAINTY

ANALYSIS / UNDERSTANDING

LIMITED DECISION MAKING

DEPENDENT ON EXISTING CRISIS MANAGEMENT CAPACITIES

CONSTANT CONFLICT OF DIFFERING INTERESTS

EMERGENCY PLANS

FIRST DAY

OBLIGATIONS (EG REPORTING OBLIGATIONS)

DRAFT EU DATA PROTECTION REGULATION

LEA COOPERATION?

FUNDAMENTAL DECISIONS (EG COMMUNICATION STRATEGY)

RISK OF INCREASING LOSSES

CONSTANT ADJUSTMENTS

FIRST WEEK

INCIDENT MANAGEMENT

KEEPING THE OVERVIEW ABOUT RECOVERY

RISK OF INCREASING LOSSES

CONSTANT ADJUSTMENTS

LAWYERS / RISK MANAGERS