



BRIEF OF THE COMMANDER OF THE INDONESIAN ARMY CRYPTO AND CYBER CENTRE

CYBER THREAT PERSPECTIVE FROM THE INDONESIAN ARMY

JAKARTA JUNE 2021



BIOGRAPHY: BRIGJEN TNI IROTH SONNY EDHIE

COMMANDER OF THE CRYPTO AND CYBER CENTRE



Education

- MILITARY ACADEMY 1993
- SIGNAL CORPS BASIC COURSE 1994
- SIGNAL CORPS ADVANCED COURSE 2002
- STAFF AND COMMAND COLLEGE 2008
- OFFICER TECH COURSE 1996
- INTELLIGENCE COURSE 1994
- COMMUNICATION COURSE 1997
- INVESTIGATOR COURSE 2000
- ADA COURSE 2004
- STRATEGIC INTELLIGENCE COURSE 2004
- INTELLIGENCE ANALYST COURSE 2009



Position History

- PLATOON COMMANDER 1994
- COMMUNICATION OFFICER 1997
- COMPANY COMMANDER DIVIF-1 KOSTRAD 1999
- JUNIOR OFFICER DIVIF-1 KOSTRAD 2002
- JUNIOR OFFICER MABES TNI (BAIS TNI) 2002
- STAFF OFFICER B-231 DIT-B BAIS TNI 2003
- ASSISTANT DA UK 2004
- STAFF OFFICER B-42 DIT B BAIS TNI 2009



Overseas Duty

- STUDY (MALAYSIA) 1997
- STUDY (AUSTRALIA) 2000
- ASSIGNMENT (UK) 2005
- STUDY (AUSTRALIA) 2009
- ASSIGNMENT (USA) 2010
- ASSIGNMENT (USA) 2013
- ASSIGNMENT (RUSIA) 2015
- ASSIGNMENT (SOUTH KOREA) 2016
- ASSIGNMENT (INDIA) 2017
- MILITARY PUBLIC AFFAIR ASSISTANT RI PTRI NEW YORK 2010
- VICE MILITARY PUBLIC AFFAIR RI DI PTRI NEW YORK 2013-2014
- SENIOR OFFICER BAIS TNI 2014 (INTERPRETER MENHAN RI)
- SENIOR OFFICER DENMA MABESAD 2014
- SENIOR CATALOGUER 2014
- SENIOR ANALYST OF WEAPON SYSTEM SECT 2016
- SENIOR ANALYST OF SOCIAL SECT 2017
- HEAD OF ADMINISTRATIVE BUREAU INDONESIAN MOD 2019
- LECTURER OF IDU 2020
- COMMANDER OF CRYPTO AND CYBER CENTRE 2020



Family

- STATUS MARRIED
- WIFE: dr. HENNY D
- CHILDREN
 - MAUDLIN KLISSA
 - GABRIELLA



Operation Duty

- ACEH MILITARY OPS
- UN MISSION BOSNIA 1996



“The war nowadays is not a conventional type anymore, it is a Culture War. Be careful, we are facing the Information War, in which certain state may become weak because of a Perception.”

President Joko Widodo

On the briefing at Taruna Nusantara High School, Magelang, January 2017





**“The supreme art of war is to subdue
the enemy without fighting”**

Sun Tzu





Current Cyber Security Issue and Trend

STRATEGIC ENVIRONMENT **CYBER**



THE 4.0 TECHNOLOGY ERA IMPLIES ON THE FORM OF 4 PHENOMENA OF THE DEFENSE ASPECTS WHICH NEEDS OUR CONCERNS, NAMELY:

1. INDUSTRIAL EVOLUTION 4.0 TOWARDS 6.0 (YEAR 2026)
2. FORMULATION OF CYBER WARFARE THEATER WITH THE CONCEPT OF CYBER DEFENSE
3. CYBER THREAT EVOLVES INTO CONVENTIONAL/MILITARY THREATS (5TH GENERATION WARFARE)
4. EVOLUTION INTO DIGITAL TRANSFORMATION ERA BASED ON IOT

EXPECTED OUTCOMES OF THE PRESENTATION

WHAT NEEDS TO BE SECURED?

CRITICAL INFRASTRUCTURE AND MINDSET

STUFFS MUST BE GUARANTEED?

C I A : CONFIDENTIALITY, INTEGRITY & AVAILABILITY

MINDSET OF SOLDIERS AND THEIR BIG FAMILYS

WHAT IS A THREAT?

**> PHYSICAL (INFRASTRUCTURE, HARDWARE
& SOFTWARE ATTACK)**

**> NON PHYSICAL (MENTAL
BRAINWARE/MINDSET ATTACK)**

HOW TO RESPOND?

BY CONCEPT, METHODS, SYSTEM & TOOLS



5TH GENERATION WARFARE ERA

 **NETWORK (Internet)**

 **COMBAT CLOUD**  **SEARCH AND ADD THE REQUIRED DATA**

 **MULTI DOMAIN BATTLE**

 **FUSION WARFARE**


K4IPP / C4ISR 

**COMMAND
CENTER**



THE IMPORTANCE OF THE MASTERY OF **CYBERS PACE**



INFORMATION
REINFORCEMENT IS THE
WINNING KEY IN THE ERA OF
GLOBAL COMPETITION
(INFORMATION WARFARE)

STATE ACTOR
NON STATE ACTOR
COMPETE TO MASTER IT

FORMS OF A THREAT

NON MILITARY
(INFORMATION
SECURITY)
CYBER SECURITY

MILITARY
- CYBER SPACE
- CYBER DEFENSE
- CYBER OPS

EACH ENTITY WANTS TO MASTER THE CYBER SPACE TO CONTROL
INFORMATION + PROCESSED INFORMATION = **POTENTIAL/POWER**

TOP 5 RISIKO GLOBAL

02

01



03



05



04



1. Cuaca ekstrem

2. Perubahan iklim

3. Bencana alam

4. Pencurian data

5. Serangan siber

Threats Definition



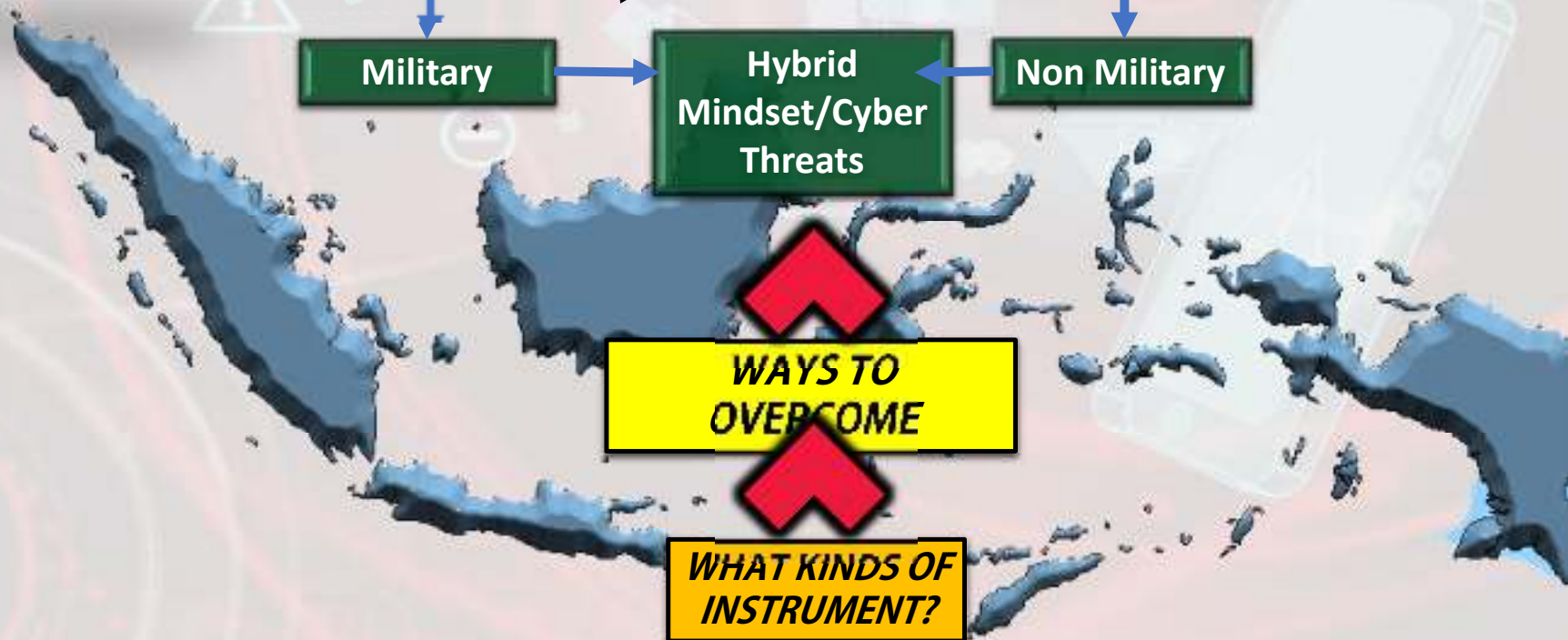
Military

Hybrid
Mindset/Cyber
Threats

Non Military

WAYS TO
OVERCOME

WHAT KINDS OF
INSTRUMENT?





NKRI PANCASILA



1945 CONSTITUTIONAL +
Opening of 1945 Constitutional

National Interest Will

Create Prosperity

Create Security

National Development

ECONOMIC GRAND
STRATEGY

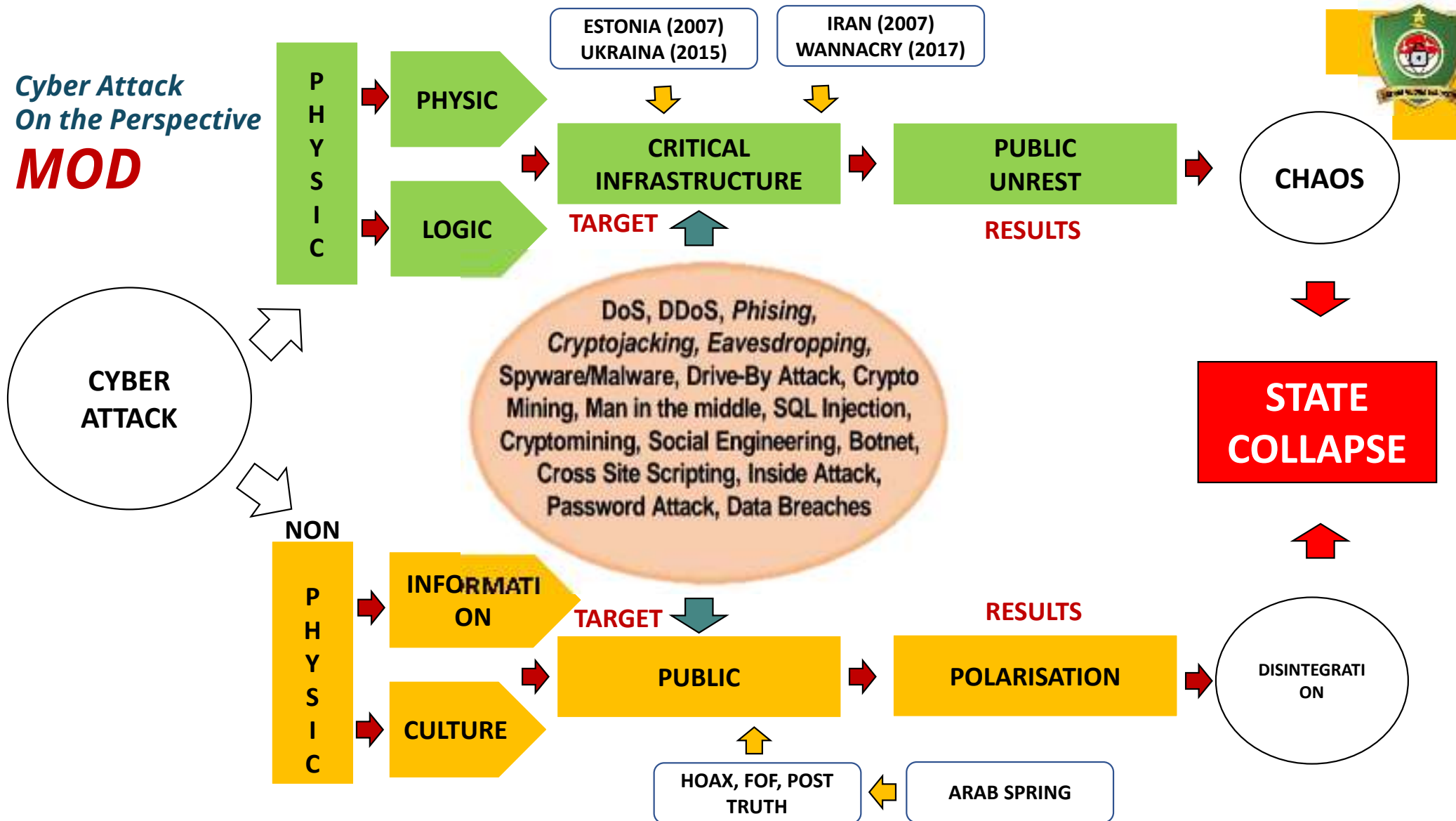
NATIONAL SECURITY
GRAND STRATEGY
(NATIONAL SECT LAW)

(BAPPENAS)
NAT.DEV. BODY

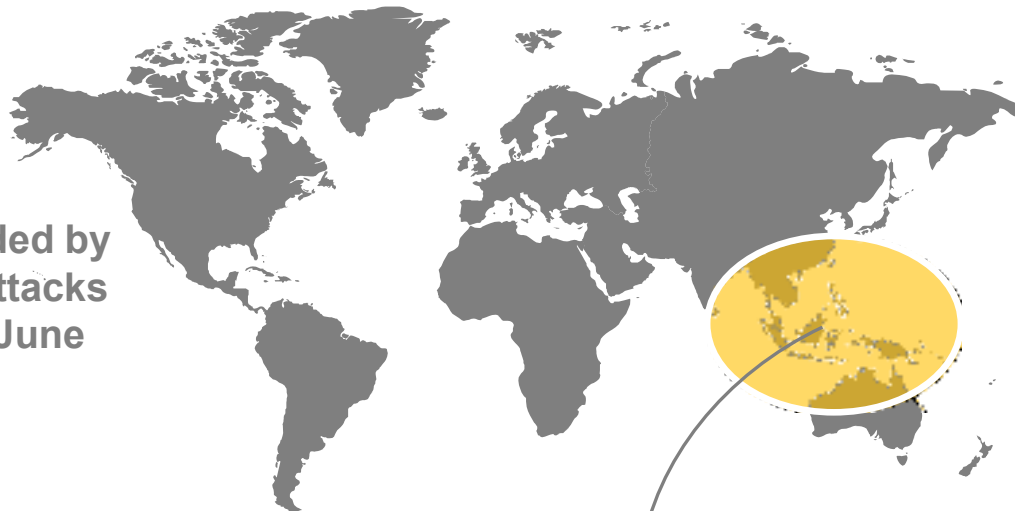
NATSEC STRATEGY

STATE DEFENSE STRATEGY

*Cyber Attack
On the Perspective
MOD*



Global Cyber Development



Indonesia was bombarded by 88,4 millions of cyber attacks since 1 January to 12 June 2020 (BSSN)



Need to develop a formidable Cyber Defense System (Cyber Defence) for Indonesia



The Research Centre for Cyber System and Security CISSReC Indonesia reveals the current trend in using AI technology

**CYBER SECURITY
BECOMES 3 TOP MAIN
GLOBAL ISSUES**

Survey research result released in 2019 by EY consultant, states that cyber security becomes 1 of 3 main issues in the world

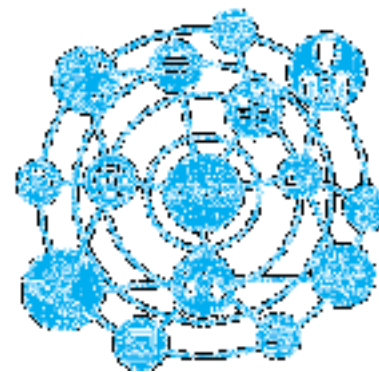
Source: Fortune 500



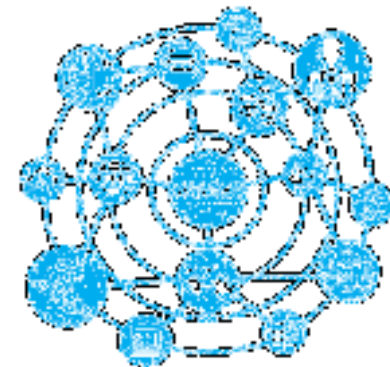
Cyber Warfare



Cyber Space



+



INFORMATION PACKAGE



THREATS

PHYSICAL

+

NON PHYSICAL

CRITICAL
INFRASTRUCTURE
BASED ON IOT

(INFORMATION WARFARE)

CYBER ATTACK TOWARDS THE WORLDS **ARMY**



AUGUST 2019 **VENEZUELA**

A 7 year campaign attacks has successfully managed to steal sensitive information concerning the Army High Ranking Officials

MAY 2013 **UNITED STATES**

Chinese Hacker breached the US ARMY computers containing sensitive information related to the dams in the country

FEBRUARY 2017 **INDIA**

Indian Army becomes the phishing attack target which may come from Pakistan

MARCH 2014 **INDIA**

Breached on the computers of the Indian Army

NOVEMBER 2018 **CHINA**

Multiple attacks from outside results in the stolen of Chinese Army unit list



THREATS IDENTIFICATION



FROM ***Strategic Environment Trend***

WE NEED TO IDENTIFY, DEFINE & MAP THE PATTERN, BASED ON THE CYBER THREATS TOWARDS THE INDONESIAN ARMY:

PHYSICAL/INFRASTRUCTURE THREATS

**VIRUS, MALWARE, DDOS,
BRUTEFORCE, PHISING THREATS ETC**



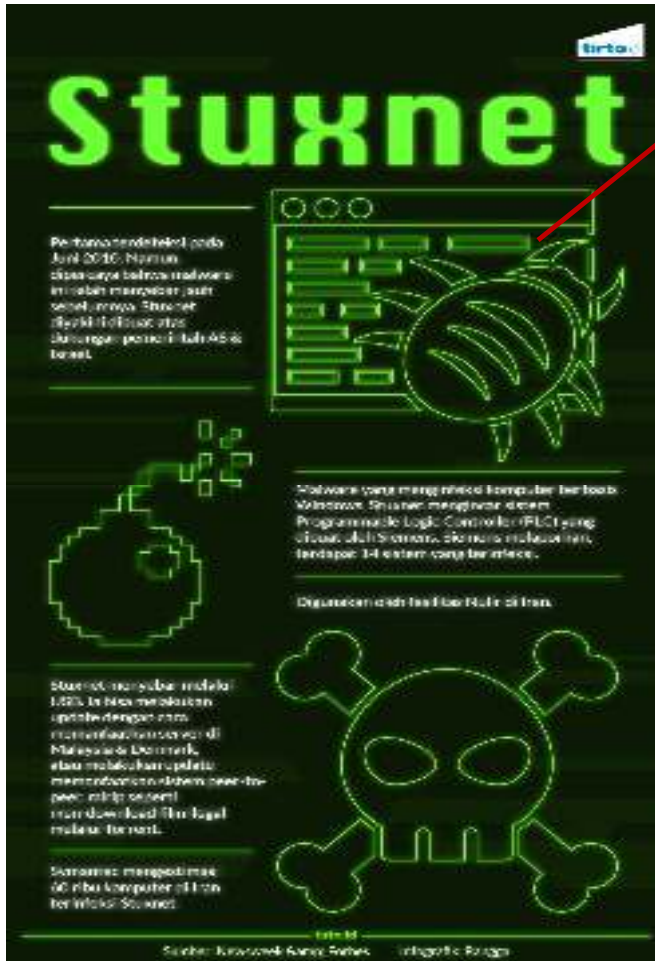
NON PHYSICAL THREATS

**INFORMATION WARFARE, HOAX,
FRAMING TO CHANGE THE MINDSET**

TYPES OF CYBER THREATS



PHYSICAL/INFRASTRUCTURE THREATS



A PROGRAM ATTACKS THE NUCLEAR ENRICHMENT SITE OF IRAN

DDOS ATTACK

KPU site is unable to be accessed by public at the voting count phase

RANSOMWARE ATTACK

Some hospitals in Jakarta can not access the patients data because the medical record data is encrypted by the hackers

WEB DEFAACEMENT

Attacks performed by changing the interface of the website pages

TYPES OF CYBER THREATS

NON PHYSICAL THREATS



01

ONLINE MEDIA
PROVOCATION

02

HOAX MODE

03

FACTS BIASED
MODE (FRAMING)

04

FACTS
MANIPULATION
MODE

05

FACTS DENIAL
MODE

06

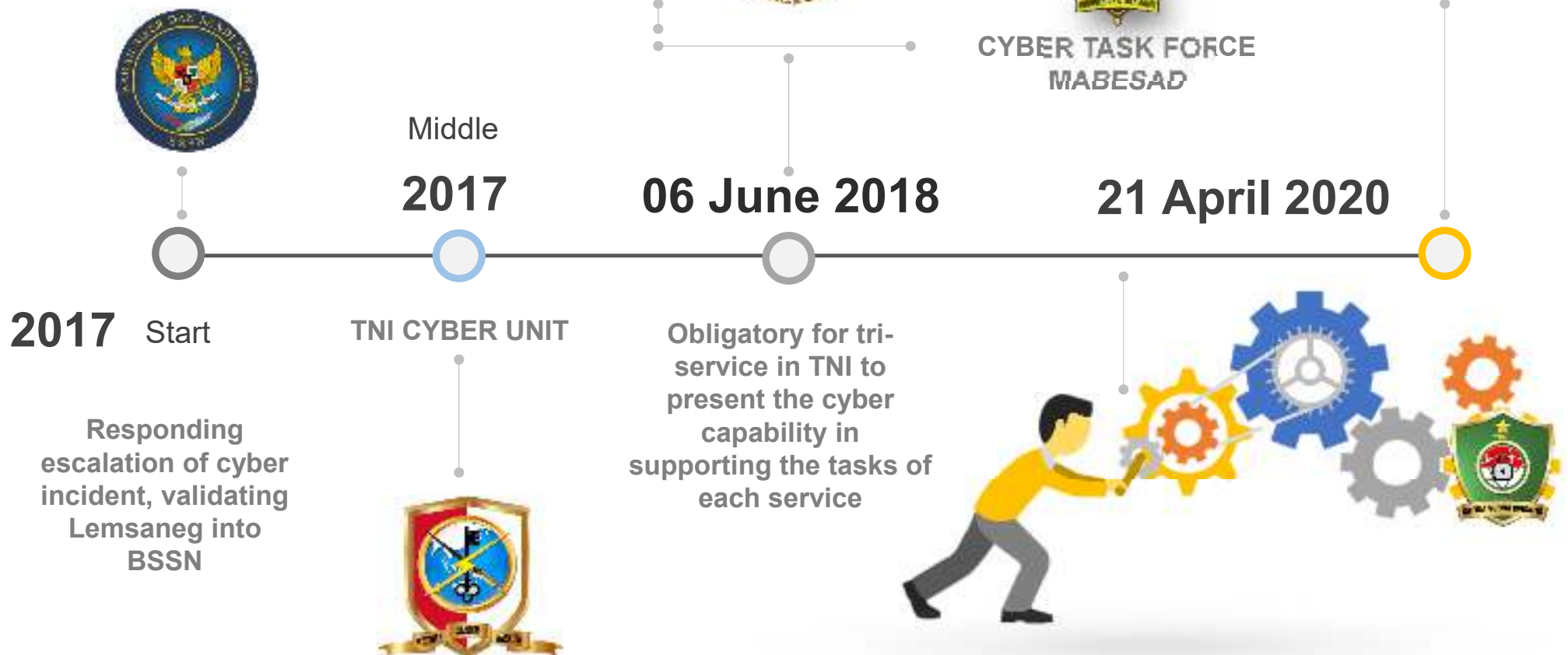
EKSPLOITATION
OF PEOPLE'S
OPINION MODE



CYBER DEVELOPMENT WITHIN TNI



PUSSANSIAD





Overview

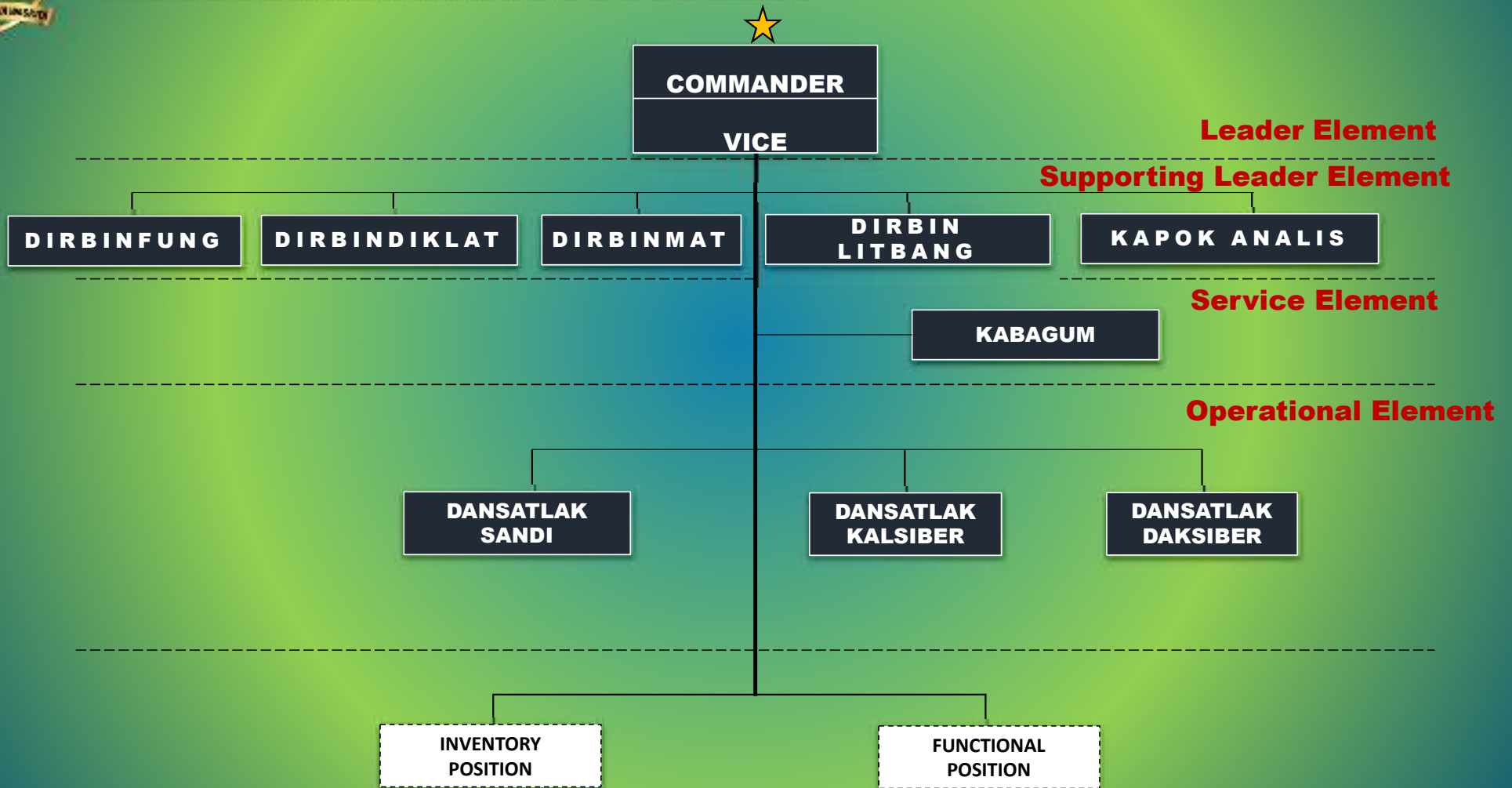
The Indonesian Army Crypto and Cyber Centre

Based on Kasad Regulation Number 26 of 2019, Attachment XXX concerning Organization and Duties of Pussansiad and Minutes of the Inauguration of Pussansiad units according to Kasad Sprint Number Sprin/1205/V/2020 dated April 9, 2020. Stipulated on April 21, 2020 as the birthday of Pussansiad.

The Army Crypto and Cyber Center or abbreviated (Pussansiad) is the Central Executing Body at the Headquarters level and is directly under the Kasad, tasked with carrying out unit development and carrying out cipher and cyber functions in order to support the duties of the Indonesian Army.



ORGANISATIONAL STRUCTURE **PUSSANSIAD**



FORMULATING THE DEENSE AND SECURITY SYSTEM OF THE ARMY FROM THE CYBER THREATS:



POLICY ASPECT
(Development Priority)



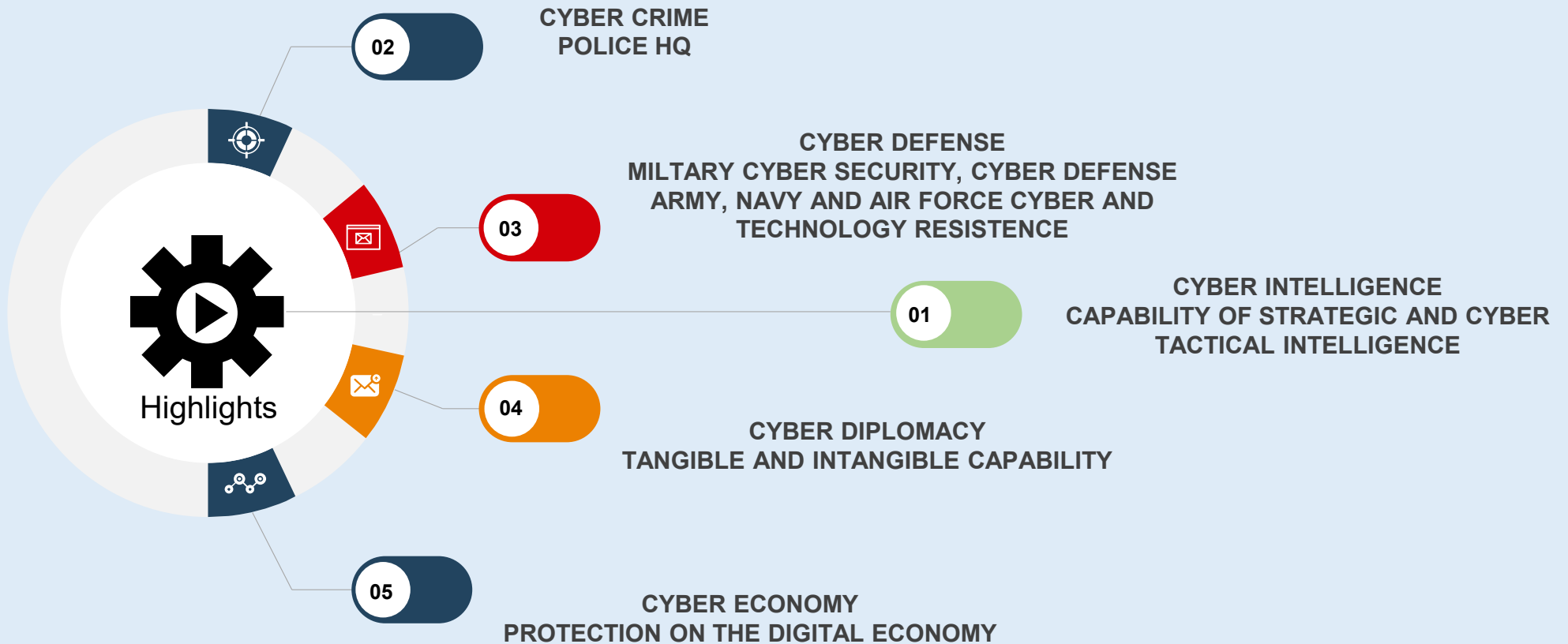
POSTURE ASPECT
POWER & DISPLAY



TECHNOLOGY ASPECT



CYBER COMMUNITY MANAGEMENT

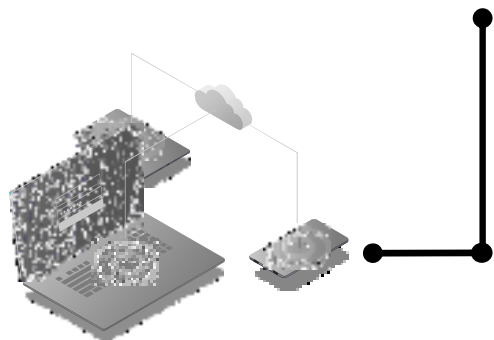




CYBER INCIDENT RESPONSE CONDUCTED BY THE **INDONESIAN ARMY CRYPTO AND CYBER** **CENTRE**



TOWARDS **CYBER INCIDENT/THREATS**
INFORMATION AND **INFRASTRUCTURE**



INFORMATION INCIDENT CONDUCTED WITH THE RESPONSE/ACT



SUSPECTS IDENTIFIED BY PUSSANSIAD

CATEGORY:

HATE SPEECH

MODE:

HURT FEELING

PLATFORM :

YOUTUBE

TECHNIQUE:

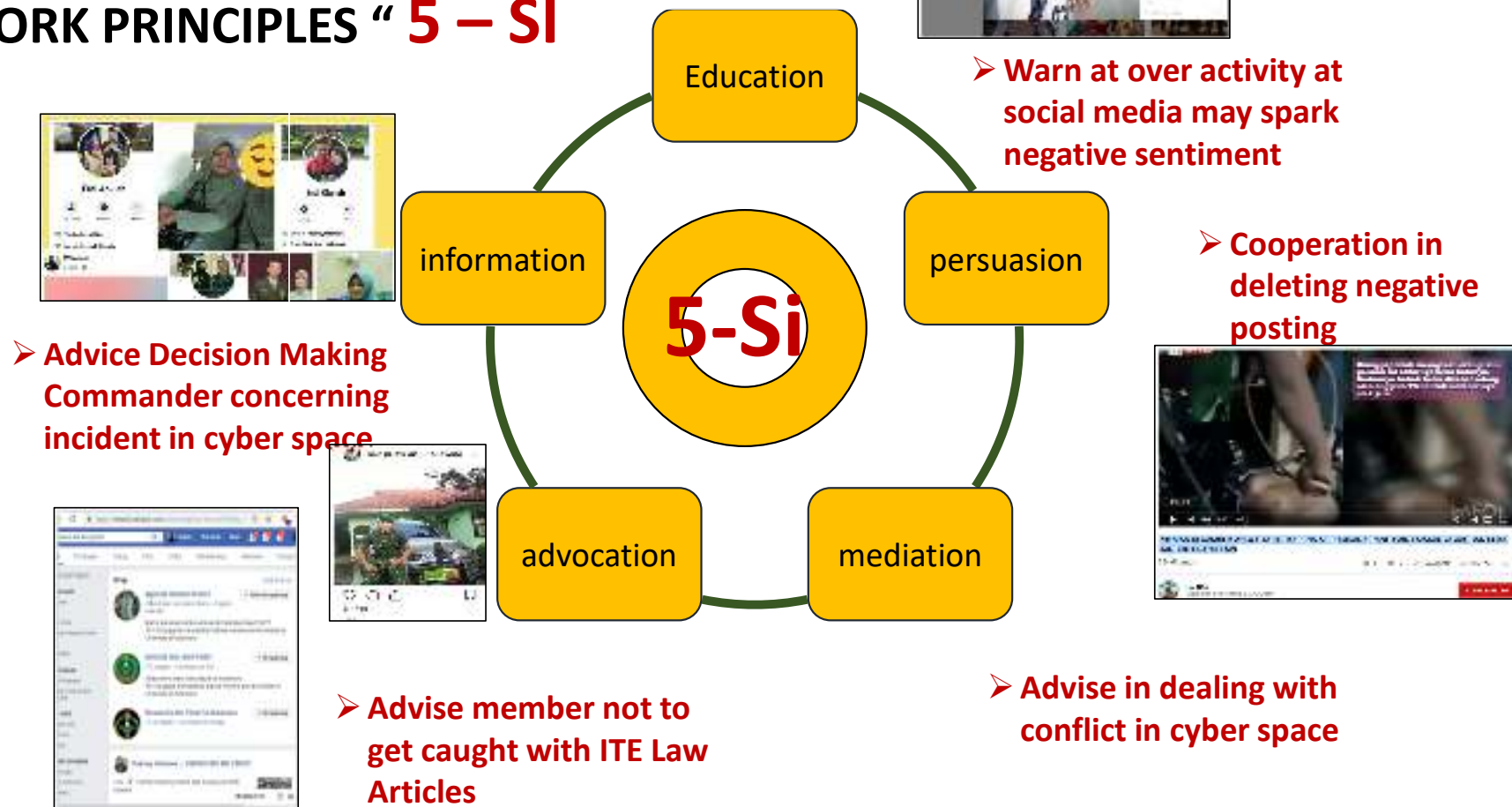
CYBER DIPLOMACY



REMARKS: The cyber diplomacy carried out by Pussansiad has succeeded in exposing figures who are detractors of hatred against the TNI and submitted to TNI Headquarters in the context of further legal proceedings.



WORK PRINCIPLES “ 5 – SI





Implementation of the Concept is manifested into
8 BASIC OPERATIONAL CAPABILITIES OF CYBER UNIT

Security and familiarization efforts against cyber threats

- 01  CAPABILITY Run the CYBER INTELLIGENCE FUNCTION
- 02  CAPABILITY Formulating Strategy and policy of cyber enforcement
- 03  CAPABILITY Formulating education and training (academics) from basic until expert levels
- 04  CAPABILITY Read and analyze SITUATION followed by making REPORT
- 05  CAPABILITY Building PARTNERSHIP and COMMUNITY reinforcement
- 06  RISK MANAGEMENT and MONITORING, to ensure synergy amongst expected objectives
- 07  CAPABILITY Responding CYBER THREATS and ATTACKS
- 08  AWARENESS and FAMILIARIZATION of CYBER SECURITY Aspects



SOME

CASES OF SOLDIERS ON

SOCIAL MEDIA

WE SHOULD AVOID



IDENTITY, SOLDIER CHARACTER & CULTURE

INDONESIAN

ARMY

IDENTITY

People Soldier
Fighter Soldier
National Soldier
Professional Soldier

CHARACTER

Soldier's Oath
Sapta Marga
8 TNI Obligation

CULTURE

Tradition
Principle & Guide
Leadership



**STR / 299/2020 DATED 28 MAY 2020 DATE OF REPRESSION RELATED
TO THE PROHIBITION OF SOLDIERS, CIVIL SERVANTS AND ITS
FAMILIES TO SPREAD HOAX NEWS AND PERSONAL OPINIONS ON
SOC MED/ ONLINE MEDIA**

**1. FOR UNIT COMMANDERS TO UNDERSTAND THAT THE
DISTRIBUTION OF THE HOAX NEWS IS PROHIBITED IN THE ITE LAW
AND IT IS SENTENCED FOR 6 YEARS IN PRISON**

**2. PROHIBITION OF THE DISTRIBUTION OF HOAX AND HATESPEECH
NEWS IS A COMMAND FROM THE INDONESIAN ARMY LEADERSHIP,
SO THE PERSONNEL WHO DOES NOT COMPLY WILL BE SENTENCED TO
JAIL FOR MAXIMUM 2 YEARS 4 MONTHS ACCORDING TO ARTICLE 103
OF THE KUHPM**



***“Remember that a
mistake done by one
person is enough to
cause the collapse of
the nation”***

dr. Roebiono Kertopati
the Father of Indonesian Cryptology



THANK YOU

THE INDONESIAN ARMY CRYPTO AND CYBER CENT

Adaptive, Responsive & Trusted

JAKARTA, JUNE 2021

