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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يُؤَسِّسُ: إِبْرَاهِيمُ بْنُ أَبِي حَسْبٍ مَلِكِيَّةً

Garden of Knowledge and Virtue

LEADING THE WAY

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GLOBAL CYBERCRIME TREATIES AND INDONESIAN LAW: CHALLENGES AND THE WAY FORWARD

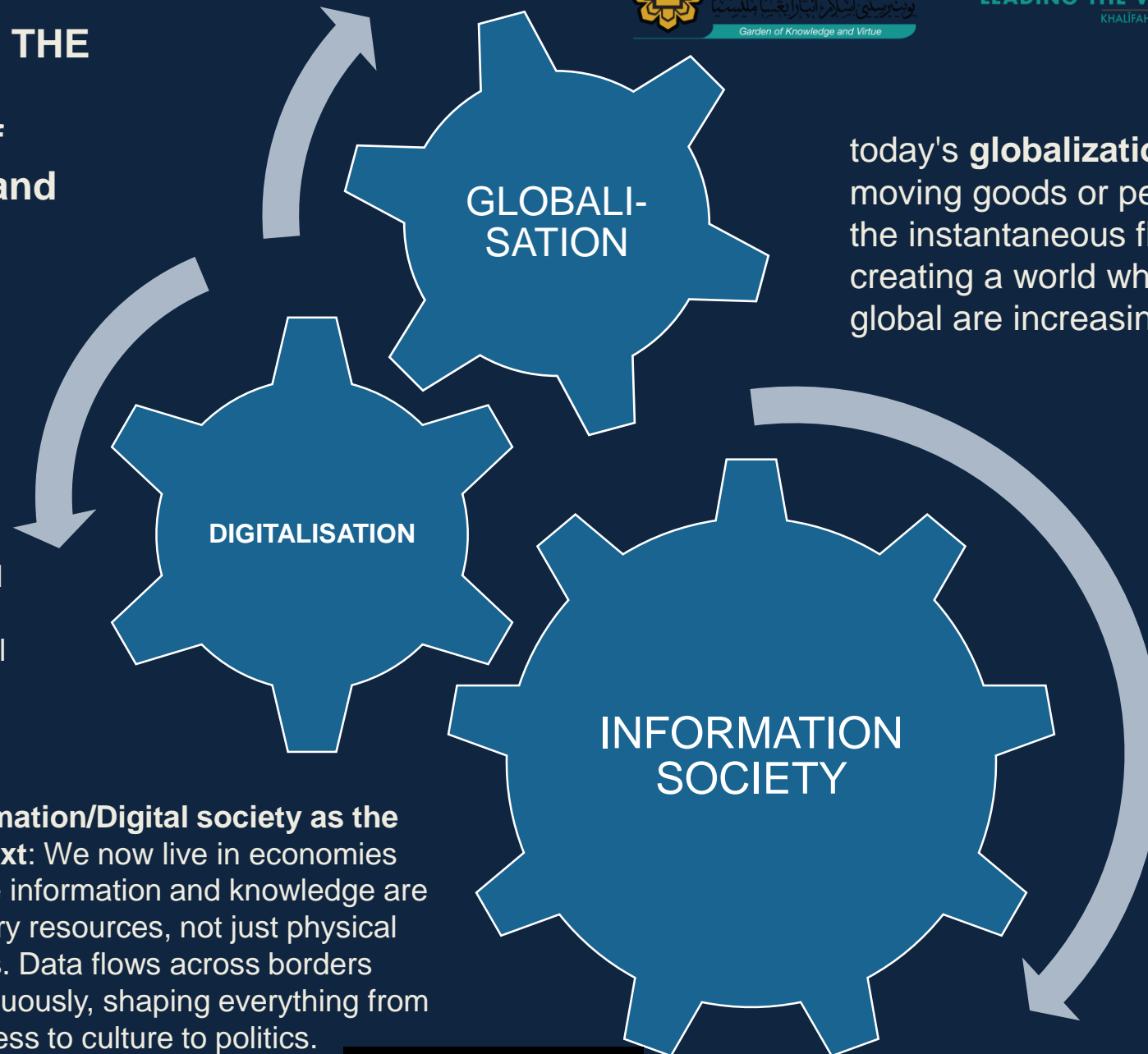
APPIHI INTERNATIONAL WEBINAR ON
“Navigating Global Complexity: Dynamics of
International Law in a Multipolar Era”
18 December 2025

DR. SONNY ZULHUDA
International Islamic University Malaysia

3 KEY FACTORS INTO THE TOPIC – the interconnectedness of economies, cultures, and societies enabled and accelerated by digital technologies.

Digitalization as the enabler: Digital technologies (internet, mobile networks, cloud computing, AI) have eliminated traditional barriers of distance and time, making instant global communication and transactions possible.

Information/Digital society as the context: We now live in economies where information and knowledge are primary resources, not just physical goods. Data flows across borders continuously, shaping everything from business to culture to politics.



today's **globalization** isn't just about moving goods or people—it's about the instantaneous flow of information, creating a world where local and global are increasingly blurred.

Transformation to the Digital Society

1. Increasing Use of the Digital Technology:

- Data processing: Computers, wearables
- Data storage: Cloud, Blockchain
- Connectivity: Internet, mobile, wireless, Metaverse, etc.
- Analytic: Machine learning, AI, etc.
- Media: Web 2.0, Social media, etc.
- Transaction: E-money, cryptocurrency, e-wallet, etc.

2. Phases of digital transformation:

Digitalisation → Datafication → Automatisisation

3. Data-driven decision making in private and public.

4. Emerging threats to the fundamental right of privacy.



Home / Viral / IShowSpeed Breaks Viewership Record with Viral Indonesia Livestream, Reaching Over 20 Million Views In Just 1 Day

Viral Entertainment

IShowSpeed Breaks Viewership Record with Viral Indonesia Livestream, Reaching Over 20 Million Views In Just 1 Day

Shreshtha Banerjee X September 21, 2024

14 1 minute read

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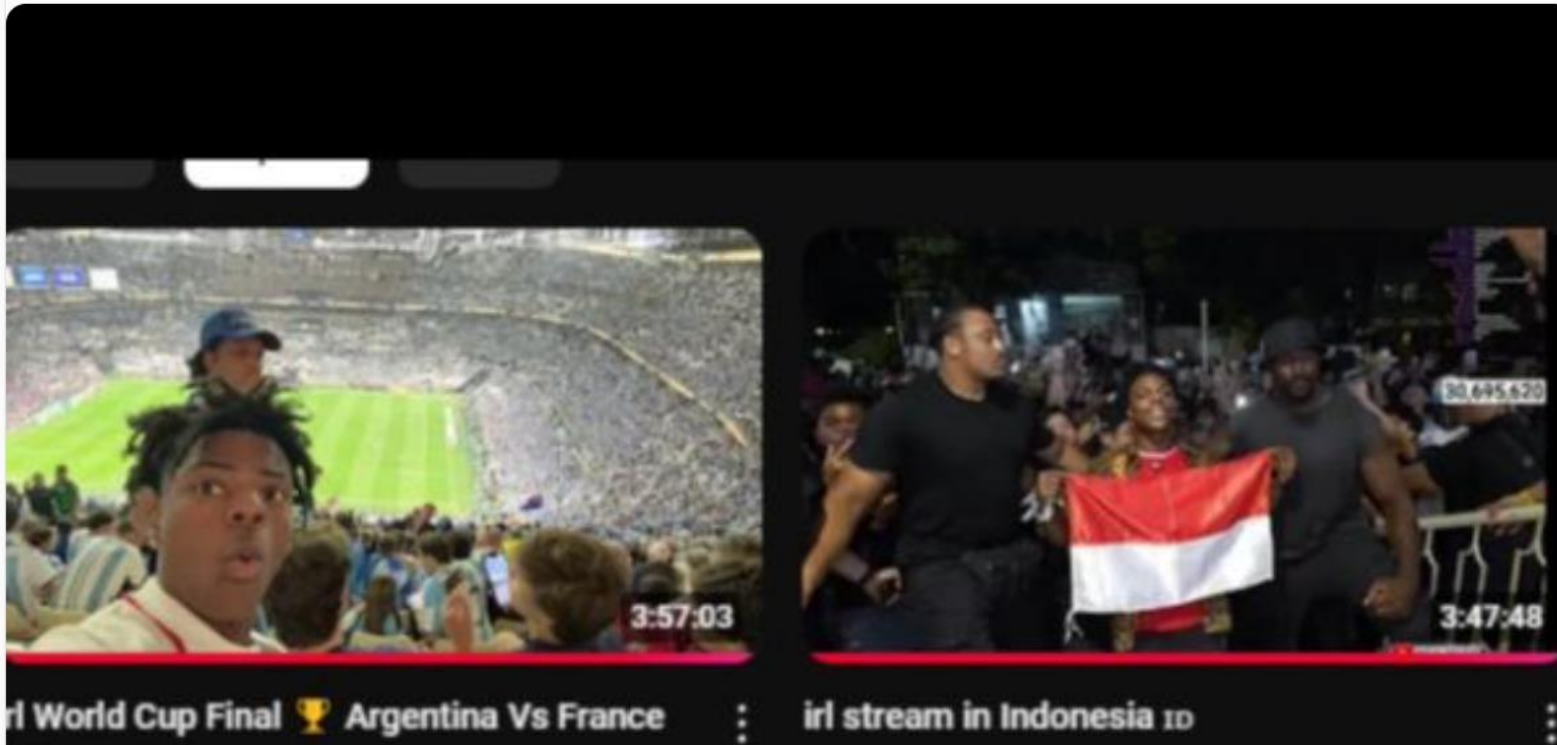
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Sexy Red Faces Backlash After Admitting to “Selling Her Soul” During Livestream

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September 22, 2024



Kerala-Born Rinson Jose’s Name Crops Up In Pager Blasts Case; Know The Latest In This Developing Story

September 22, 2024

By Shreshtha Banerjee



Sexy Red Faces Backlash After Admitting to “Selling Her Soul” During Livestream

September 22, 2024



IShowSpeed Says “Nami. I Love You!” After Seeing A Cosplay Artist Video Goes Viral

September 21, 2024



YouTuber IShowSpeed Surrounded by Massive Fan Crowds in Malaysia, Forced To Take Shelter

Digitalisation and Data Centrality

Malaysia: 8th

Malaysia is ranked eight with the highest penetration of social media (83%)

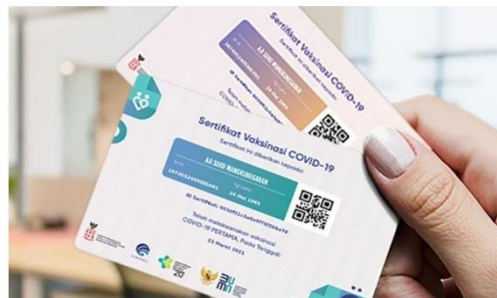
Indonesia: Top 4

Indonesians among the highest social media audience:

2nd on Tiktok (after the US)

3rd on FB (after India and the US)

4th on Youtube, Instagram, Twitter and WhatsApp



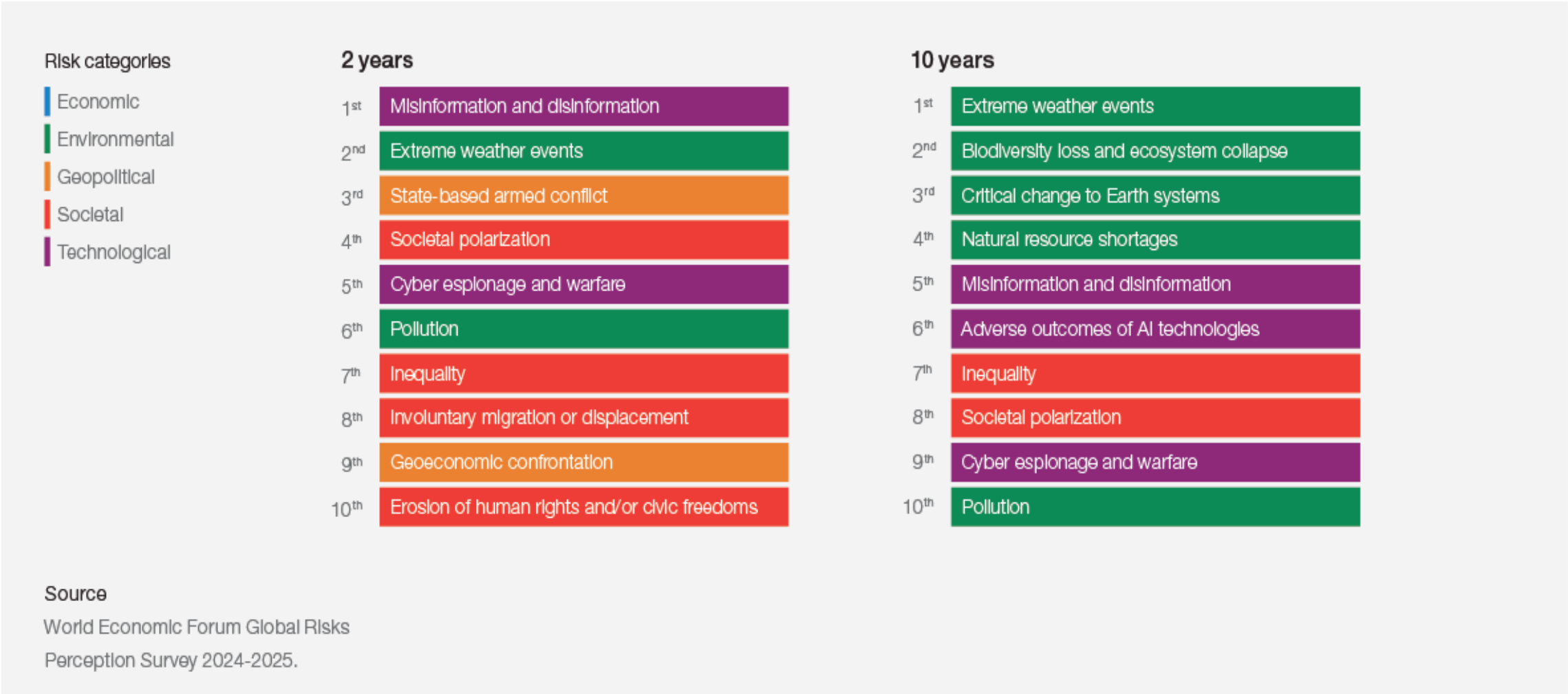
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Global Risks Severity: AI-related Risks Top 5 (World Economic Forum 2025)

FIGURE C Global risks ranked by severity over the short and long term

"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."



Global risks landscape:
an interconnections map

Source: World Economic Forum, Global Risks Perception Survey 2024-2025

Cyber Risks in the Financial Institutions

Data breaches still haunt Indonesia as BSI becomes latest victim

The hacker group, which uses malicious software LockBit 3.0 that blocks user access to computer systems, claimed to hold BSI's data, including its customers' and employees' contact details, financial documents, card details and passwords of the customers.



StarPlus News Asean+ Business Sport Metro Lifestyle Food Tech Education

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Potential data breach at iPay88 still under probe, says Bank Negara

THE STRAITS TIMES

8,500 phishing cases in Singapore in 2022; more than 80% spoofed a bank or financial service

Maybank warns of new fake banking website created to steal customer details

By ANGELIN YEOH

Singapore bank faces regulatory action over 'unacceptable' digital service outage

Hours-long disruption to DBS' online banking services is the second such incident in just over a year, notes Singapore's industry regulator, which says the bank has "fallen short" in ensuring system availability and quick recovery.



Search News

TEMPO EXCLUSIVE

Police Arrest EDCCash CEO over Cryptocurrency Fraud



LIFE • LIFESTYLE

The 'pinjol' trap: The horrors of payday loans in pandemic-stricken Indonesia

Many Indonesians are drowning in overbearing loans and intimidation attacks after taking out on loans to survive.

JP Staff (The Jakarta Post)

PREMIUM Jakarta • Fri, September 17, 2021

Dugaan Kebocoran Data, Bank Jatim: Data Penting Nasabah Dipastikan Aman

Kompas.com - 29/10/2021, 18:38 WIB

Recent Data Breach Incidents in Indonesia



BPJS Kesehatan
Badan Penyelenggara Jaminan Sosial



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eHAC Indonesia
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NPWP
Nomor Pokok Wajib Pajak

PUSAT DATA NASIONAL
KOMINFO

BSI
BANK SYARIAH
INDONESIA

<https://inet.detik.com/security/d-7549825/data-npwp-bocor-tambah-daftar-panjang-kasus-kebocoran-publik-di-ri>

<https://nasional.kompas.com/read/2021/09/03/18445501/deretan-kasus-kebocoran-data-pribadi-dalam-dua-tahun-terakhir>

<https://www.liputan6.com/tekno/read/5285458/kronologi-bsi-jadi-sasaran-ransomware-lockbit-aksi-peretasan-diduga-saat-libur-lebaran>

BAHAYA BOBOLNYA PUSAT DATA NASIONAL

Pusat Data Nasional (PDN) lumpuh akibat *ransomware* Brain Cipher pada Kamis 20 Juni lalu. Akibatnya, aktivitas layanan publik di sejumlah kementerian/ lembaga terhambat.

Ransomware Menyerang PDN



Dampak

- ▶ 24 kementerian
- ▶ 32 lembaga
- ▶ 210 layanan publik pusat & daerah



Jenis ransomware

Brain Cipher (varian *Lockbit* 3.0)

- ▶ Ekstraksi Data
- ▶ Enkripsi Data
- ▶ Mengirim ID enkripsi dijual di *dark web*
- ▶ Mirip *ransomware* yang menyerang BSI pada 2023

Dkatadata.co.id
#KalauBicaraPakaiData
Ekonografik

Tebusan yang diminta peretas
US\$8 juta
(Rp131 miliar)



Data yang Bocor di *Dark Web*

Sejak bocornya Pusat Data Nasional, beragam data pribadi penduduk Indonesia diperdagangkan di BreachForums*

*) Data diambil pada 25 Juni 2024, pukul 14.37 WIB

- | | |
|--|---|
| ▶ Anggota DPR | ▶ Data guru Yogyakarta dari Ditjen Guru dan Tenaga Kependidikan |
| ▶ Anggota Badan Intelijen Strategis (BAIS) TNI | ▶ Karyawan Astra Indonesia |
| ▶ Anggota INAFIS Kepolisian | ▶ Karyawan PT Berca Kawan Sejati |
| ▶ Anggota Kepolisian RI | ▶ Lebih 15 ribu KTP, SIM, & paspor penduduk Indonesia |
| ▶ Pekerja di SatuData.go.id | |

SUMBER: KOMINFO, BREACHFORUMS, BROADCOM, KATADATA, KOMPAS |
NASKAH: PUJA PRATAMA |
ILUSTRASI: FREEPIK, A.I |
DESAIN: AMOSELLA |
PRODUKSI: JUNI 2024

“Apakah ada kaitan judi online atau tidak, itu nanti dalam tahap investigasi selanjutnya.”

Nezar Patria, Wakil Menkominfo



KATADATAcoid

Katadata Indonesia

katadatacoid www.katadata.co.id



Learning from the Recent Data Breaches....



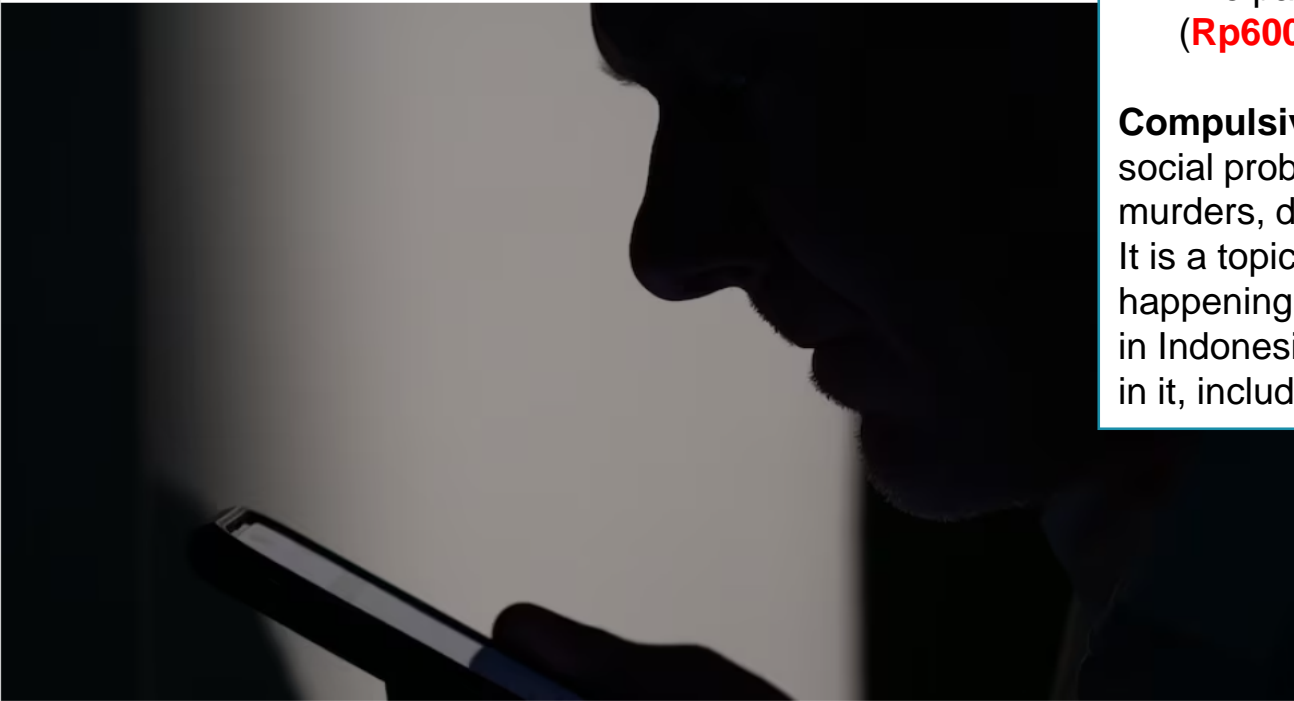
- In 2025, **critical infrastructure organizations** around the world have faced a wave of cyber threats driven by **espionage**- or **sabotage**-motivated threat actors, **financially motivated ransomware** groups, and **ideologically driven hackers**.
- The cyber operations are often connected to real-world geopolitical and ideological conflicts.
- Adversaries increasingly **"log in"** rather than **"break in,"** so they exploit legitimate accounts and authentication processes to gain access.

Morgan Adamski, PwC US (2025)

ANALYSIS

Indonesia has to hold or fold on online gambling ban

360info / By Bambang Pratama
Posted 20 Aug 2024, updated 20 Aug 2024

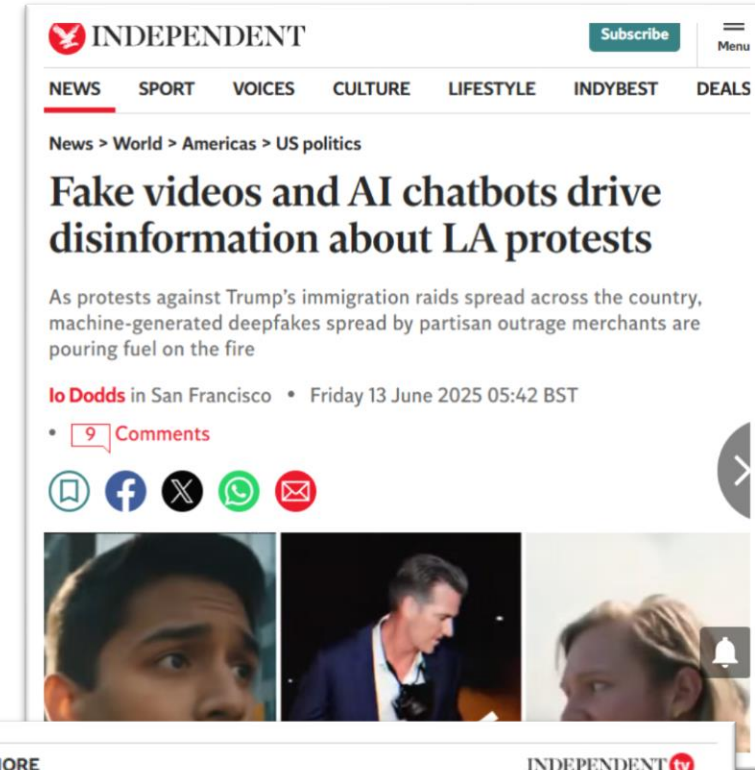
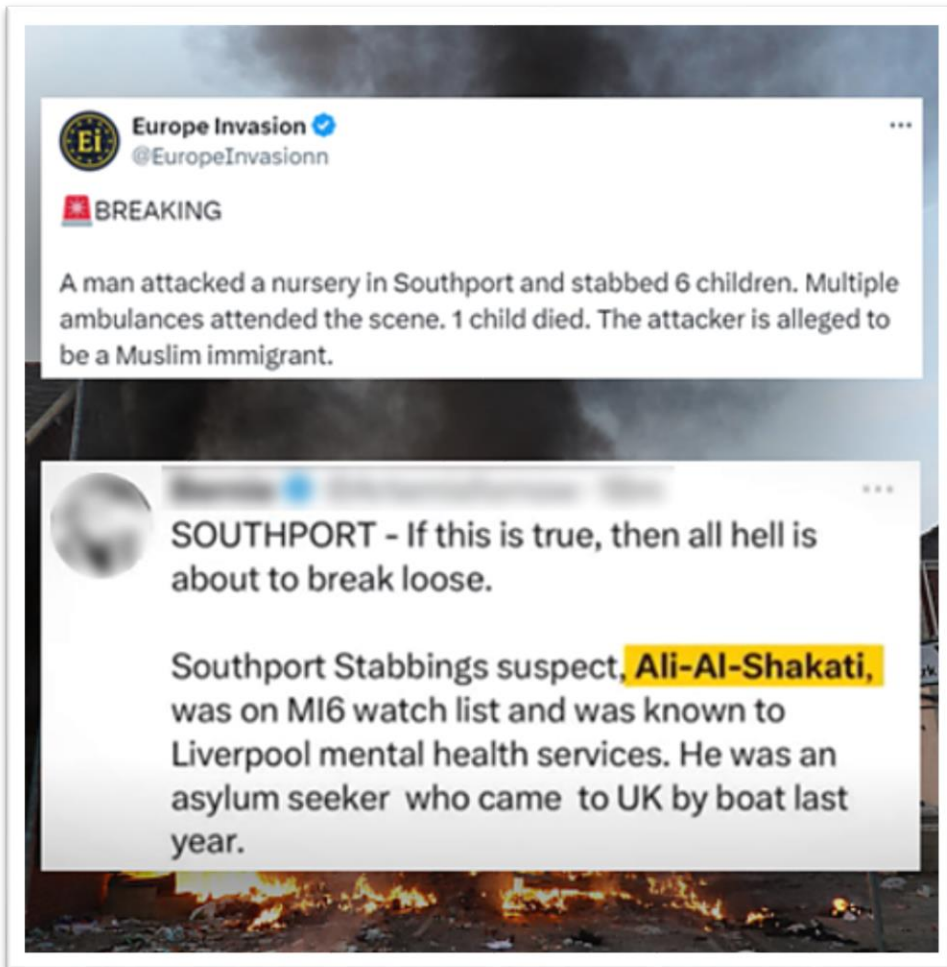


- Indonesia's online gambling problem is **huge**.
- Indonesians lost an estimated \$30.7 billion (**Rp327 trillion**) gambling online in 2023.
 - More than 10% (440,000) online gamblers are **11-20 yrs**.
 - A staggering 80,000 more are **under 10**.
 - The past 5 yrs, cash flow is estimated at \$56.36 billion (**Rp600T**).

Compulsive online gambling plays a role in detrimental social problems such as addiction, loan shark debts, murders, divorce and various mental health problems. It is a topic of national concern in the media. This is all happening despite gambling, for the most part, being illegal in Indonesia. That has not stopped millions from indulging in it, including **government officials**.

<https://www.abc.net.au/asia/indonesia-has-a-huge-online-gambling-problem/104179856>

AI and Misinformation



BY MATT BURGESS SECURITY JUL 14, 2025 7:00 AM

AI 'Nudify' Websites Are Raking in Millions of Dollars

Millions of people are accessing harmful AI "nudify" websites. New analysis says the sites are making millions and rely on tech from US companies.





“

Despite helping to improve productivity, efficiency, the quality of life, and creativity of humans, modern and dynamic Generative AI technology also has a dark side that society needs to be aware of. Human values, data protection, and the responsible use of technology are all affected and given a new meaning by this technology.

”

Therefore, all developers, researchers, data scientists and decision-makers to work together to develop and adopt AI-related technology Responsibly and Ethically.

Dato' Seri Anwar Ibrahim -The Prime Minister of Malaysia



Scammers used a Malaysian minister's phone to dupe victims

Minister Wan Junaidi's Telegram account was misused, one of his contacts had already transferred RM5,000 to the scammer

According to CyberSecurity Malaysia, during the COVID-19 outbreak, online scams have dramatically increased in Malaysia over the past two years. From 2020 to May 2022, 71,833 frauds totaling more than RM5.2 billion in damages were reported. Online scams made up 48,850 of the total number of frauds, or 68%, and 26,213 of those instances were brought to court. 9,569 incidences of e-commerce fraud were reported in 2019 compared to 5,851 cases in 2020. 3,833 cases were reported up to May of 2022. The other scams include loans and investments fraud (350 cases), job scams, and other frauds (11,875 cases).

The Domestic Trade and **Consumer Affairs Ministry (KPDNHEP)** received 12,348 scam complaints as of June 30, 2022, where 4,114 of them involved online scams.

Consumers can report online scams both to the local police, the Central bank of Malaysia, and the **Commercial Crime Investigation Department (CCID) Scam Response Centre**. The CCID Scam Response Center was set up in March 2021 as a one-stop report and response center.

The CCID has developed a **portal** to enable the public to check telephone and bank account numbers used by the crime syndicates. The same functionality is also available **via an app**.

First launched in July 2021, the broadly supported #TakNakScam campaign aims to create awareness on how to spot, check and report scammers. During the campaign period, there was a downward trend in the number of scam cases reported.

The campaign, which ran for five months, reached 6.7 million people with a total of 234,000 engagements. This year the campaign is repeated and will focus on the top five online scams (e-commerce, loans, jobs, investment scams and money mulling).



Key Statistics:

Population:	32.7 million
Internet:	77%
# of Scams:	39,525
Scams / 1,000 :	1,21
Money lost:	\$ 482 million*
Per capita:	\$ 14,73
Per report:	\$ 12,312

Key Organizations:

- **CCID Scam Response Center**
- **Royal Malaysia Police**
- **Consumer Affairs Ministry**

WhoisXML API:

Domains/capita	0.049
Domains registered	1,605,703
TLD registrations	401,814

ScamAdviser (2022). "The Global State of Scams Report 2022". Link: <https://cdn.newswire.com/files/x/86/3f/d13f26933c9f5a37a25b541af359.pdf>

UN agency map reveals Cambodia as global scammer hub

[Sign up now](#): Get insights on Asia's fast-moving developments



Contrary to widespread assumptions that Myanmar is the regional epicentre, Cambodia now appears as the leading hotspot for cyber fraud operations.

PHOTO: ST FILE

Disekap, disetrum, dan dipukul hingga babak belur: Pengakuan WNI yang menyelamatkan diri dari perusahaan scam di Kamboja



EPA



[Home](#) > [News](#) > World-first "Cybercrime Index" ranks countries by cybercrime threat level

World-first "Cybercrime Index" ranks countries by cybercrime threat level

RESEARCH SOCIAL SCIENCES

Following three years of intensive research, an international team of researchers have compiled the first ever 'World Cybercrime Index', which identifies the globe's key cybercrime hotspots by ranking the most significant sources of cybercrime at a national level.

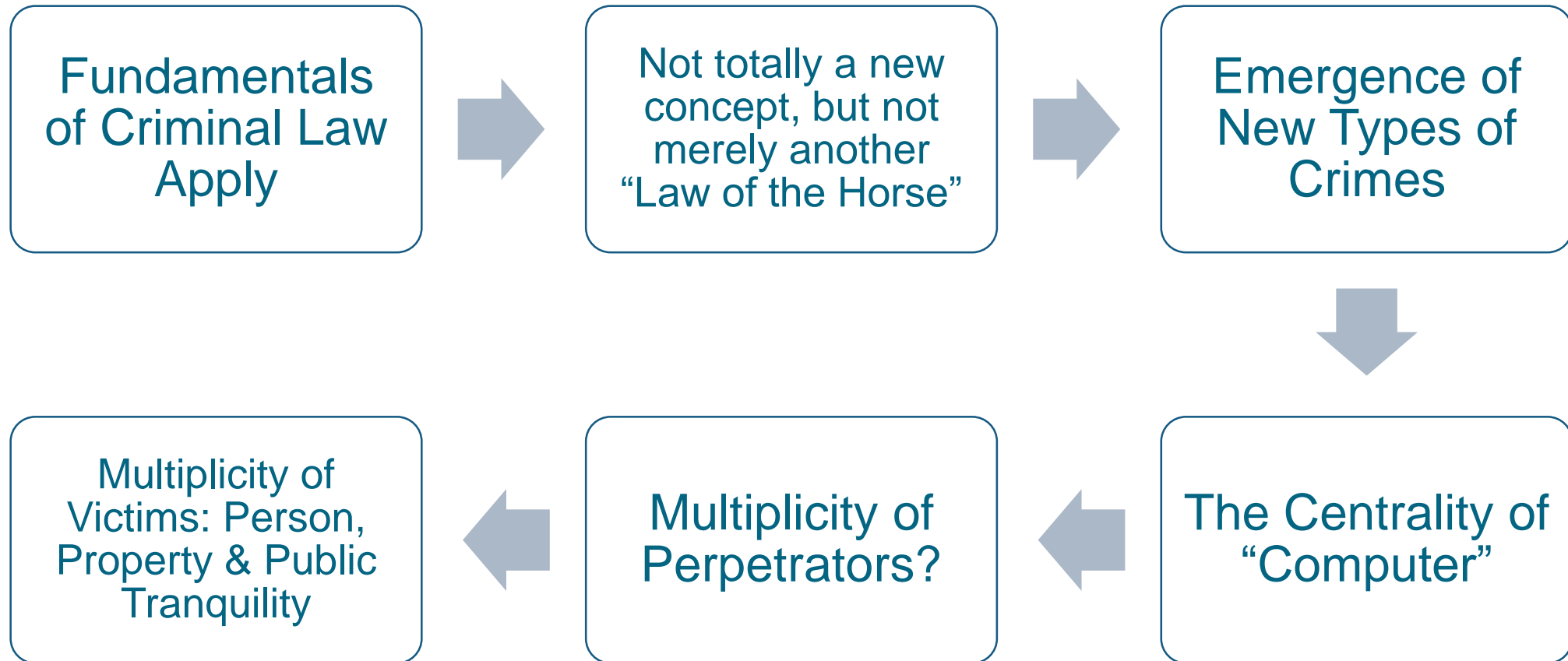
CYBERCRIME INDEX

Ranking countries by cybercrime threat level

	Ranking	Country	WCI score		Ranking	Country	WCI score
	1	Russia	58.39		11	Iran	4.78
	2	Ukraine	36.44		12	Belarus	3.87
	3	China	27.86		13	Ghana	3.58
	4	United States	25.01		14	South Africa	2.58
	5	Nigeria	21.28		15	Moldova	2.57
	6	Romania	14.83		16	Israel	2.51
	7	North Korea	10.61		17	Poland	2.22
	8	United Kingdom	9.01		18	Germany	2.17
	9	Brazil	8.93		19	Netherlands	1.92
	10	India	6.13		20	Latvia	1.68

<https://www.ox.ac.uk/news/2024-04-10-world-first-cybercrime-index-ranks-countries-cybercrime-threat-level>

Nature of Cyber Crime

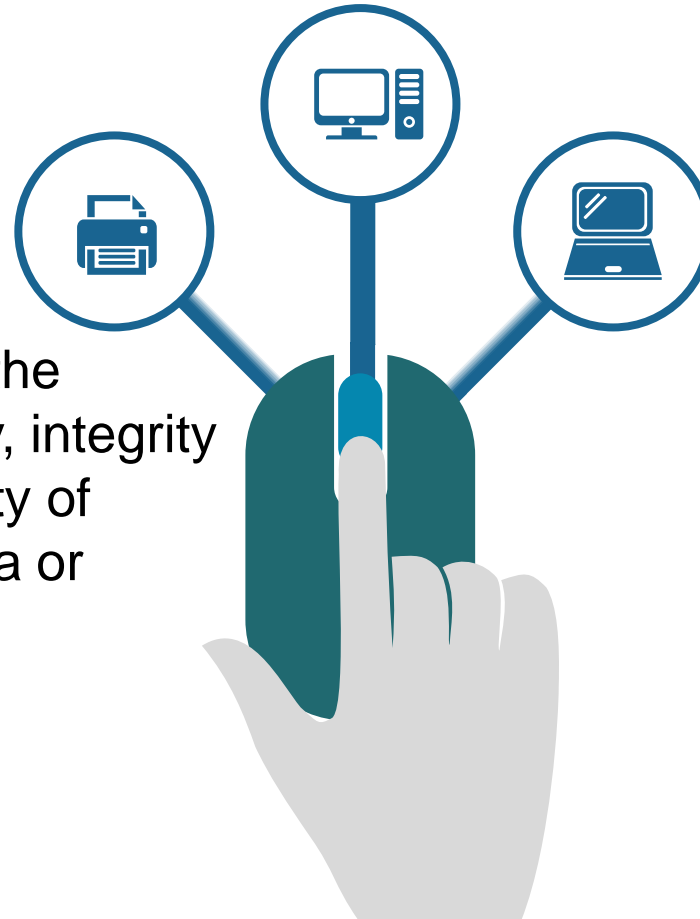




Categories of Cyber Crime

Computer-related acts

Acts against the confidentiality, integrity and availability of computer data or systems.



Computer content-related acts



Justification for a Cybercrime Convention

- Challenges of the **digitalisation**, **convergence** and **globalisation** of computer networks;
- Risk that computer networks and electronic information may be **used for committing criminal** offences and **storing related evidences**
- Need for **co-operation** between States and private industry in combating cybercrime
- Need to protect **legitimate interests** in the use of information technologies
- Need for an increased, rapid and well-functioning **international co-operation** in cyber criminal matters
- Need to **eliminate safe havens** for cyber criminals



The Objectives of Cybercrime Convention

Harmonising the domestic criminal **substantive law elements of offences** and connected provisions in the area of cyber-crime

Providing for **domestic criminal procedural law powers** necessary for the investigation and prosecution of such offences as well as other offences committed by means of a computer system

Setting up a fast and effective regime of **international co-operation**.

International Cyber Law Landscape

Budapest Convention on Cybercrime 2001

Outlines laws on all types of cybercrimes including crimes against computers and other crimes via computer system..

EU General Data Protection Regulations 2016

Regulates EU members and other countries on personal data processing. Considered as a global benchmark

UN Convention on Countering the Use of Information and Communications Technologies for Criminal Purposes

A new UN Convention officially adopted in 2024, signed by 75 member countries in 2025 (Indonesia not signed yet)

COE Convention 1981 for the Protection of Individuals with regard to Automatic Processing of Personal Data

The first Convention on data protection followed by countries beyond Europe.

UN Guidelines & OECD Guidelines on Consumer Protection

Outlines recommendations on online consumer protection

UNCITRAL Model Law on Electronic Commerce 2005

Provides comprehensive guidelines for fundamental rules on electronic contract.



International Cybercrime Treaties

Budapest Convention on Cybercrime 2001

Adopted in Budapest in 2001 as a European Treaty, and was further expanded to be opened to the rest of the World.

Article 2. Illegal access
Article 3. Illegal interception
Article 4. Data interference
Article 5. System interference
Article 6. Misuse of devices
Article 7. Computer- related forgery
Article 8. Computer- related fraud
Article 9. Offences related to child pornography
Article 10. Offences related to infringements of copyright and related right

United Nations Convention against Cybercrime; *Strengthening International Cooperation for Combating Certain Crimes Committed by Means of Information and Communications Technology Systems and for the Sharing of Evidence in Electronic Form of Serious Crimes*

A new Convention adopted by the UN General Assembly in New York on 24th December 2024 by Resolution 79/243.

Article 7: Illegal access
Article 8: Illegal interception
Article 9: Interference with electronic data
Article 10: Interference with an information and communications technology system
Article 11: Misuse of devices
Article 12: ICT technology system-related forgery
Article 13: ICT system-related theft or fraud
Article 14: Offences related to online child sexual abuse or child sexual exploitation material
Article 15: Solicitation or grooming for the purpose of committing a sexual offence against a child
Article 16: Non-consensual dissemination of intimate images
Article 17: Laundering of proceeds of crime



Legal Responses in Indonesia

Law No. 11/2008 (E-Information
and E-Transaction)

Law No. 19/2016 (Amendment to
Law No. 11/2008)



Law No. 44/2008 (Pornography)

Law No. 14/2008 (Freedom of
Public Information)



Presidential Regulations No. 95/2018 (Electronic-
Based Government System)
Presidential Regulations No. 39/2019 (One Data
Indonesia)

Presidential Regulations No. 28/2021
(National Cyber and Crypto Agency)



Presidential Regulations No. 74/2017 (E-Commerce Roadmap)
Government Regulations No. 71/ 2019 (Administration of
Electronic System and E-Transaction)
Government Regulations No. 80/2019 (Electronic Commerce)



Law No. 27/2022 (Personal
Data Protection)

Challenges in Regulating Digital Technologies



Responsive Legislation and Judiciary

Indonesia shall ensure its legal framework responds all new legal challenges with new offences, new procedures or new evidentiary rules.



Preventive (+ reactive) Approach

Law on digital landscape shall provide clear set of due-diligence and risk-based approaches, so that we do not rely only on punitive measures, e.g. through corporate liability, fault-based damages, administrative licensing.



Risks of Over-criminalisation

Unclear law and weak enforcement will only lead to public distrust and tendency of over-criminalization and over-litigation



Securing International Cooperation

Mostly required when addressing the difficulty of enforcing the law against foreign perpetrators. Also helpful to combat international crimes, transnational organized crimes (eg Terrorism) or issues of cross-border data transfer/data localisation.



Keeping in Mind the Geopolitics of Cybercrime

As Indonesia plays an active and open diplomatic role, keeping the geopolitics of cybercrime Conventions in check is crucial.





Closing Remarks

01

As a social instrument, the law changes with the change of the society. The dynamics of cybercrime requires Indonesia to keep its cybercrime law relevant and responsive

02

Cybercrime emerges as another international and transnational crimes. Geopolitics, globalization, international trade and regionalism are all playing important role.

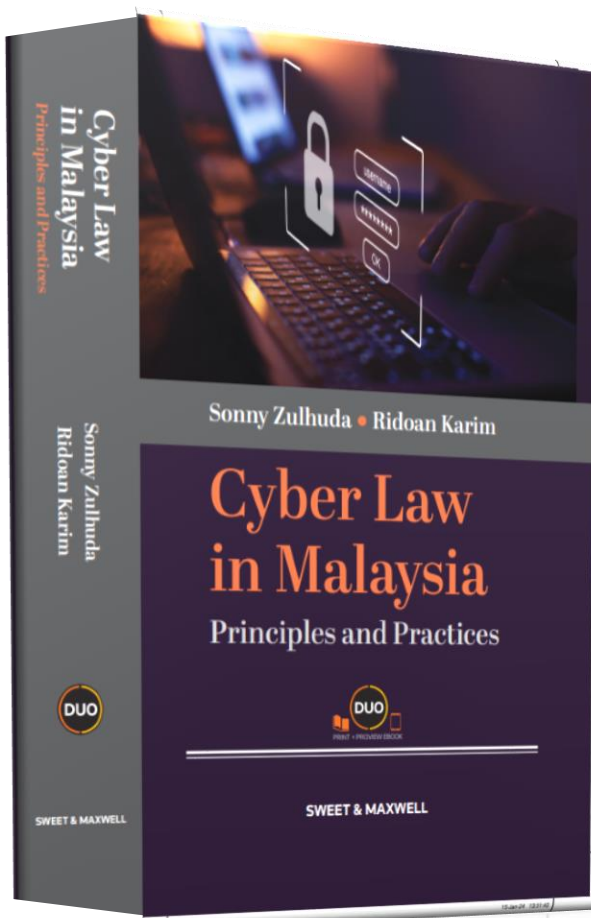
03

Reform on cybercrime legal landscape requires unconditional commitment at home to seriously enforce the law.

Reading List

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2. Budi Agus Riswandi, Sonny Zulhuda, Ari Wibowo, Ratna Hartanto, Nabilla Maryam Luthfidyfa and Vania Lutfi Safira Erlangga. (2023). *Personal Data Protection Law (Comparative study on Indonesian and Malaysian Law)*. UII Press, Yogyakarta, Indonesia.
3. Lawrence Lessig. (1999). The Law of the Horse: What Cyberlaw might Teach. 113 *Harvard Law Review* 501.
4. Shoshana Zuboff (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. London: Profile Books Ltd.
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6. Viktor Mayer-Schönberger, Kenneth Cukier. (2013). *Big Data: A Revolution that Will Transform How We Live, Work and Think*. London: John Murray.





THANK YOU

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