IT-GRC, Privacy and Cybersecurity Management

Cybersecurity Act and Personal Data Protection Act Update

Future Trends Cybersecurity in Internal Audit

EXECUTIVE SUMMARY



PRINYA HOM-ANEK

CISSP, CSSLP, SSCP, CASP, CFE, CBCI, CSX, ITIL Expert, CDPSE COBIT 5 Foundation, COBIT 5 Implementation

Eisenhower Fellowships 2013, Member of (ISC)² Asian Advisory Council, ISACA Bangkok, Thailand Information Security Association (TISA) Board Member, Cybertron Co., Ltd. – CEO & ACIS Professional Center – Chairman of Executive Committee



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Ne have been certified to

ISO 22301:2012 (BCMS) to ISO/IEC 27001:2013 (ISMS) ISO/IEC 20000-1:2011 (IT-SMS)

Thailand

standards.

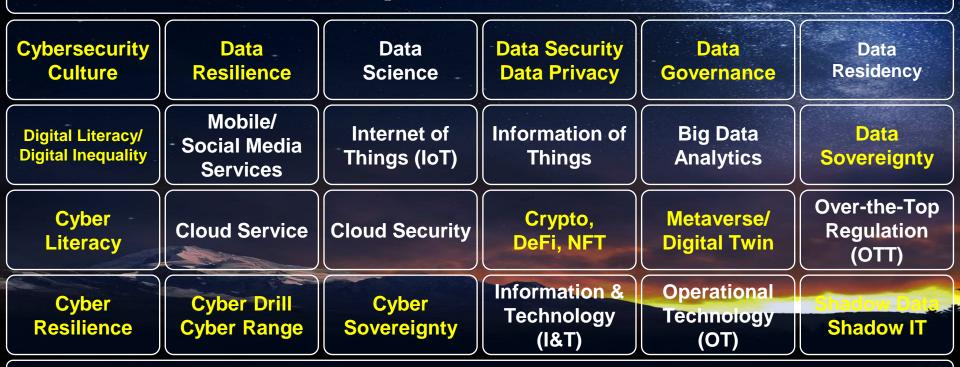
ACIS/Cybertron Privacy & Cybersecurity Research LAB

Security Intelligence



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Hot Topics in 2021-2022



Regulatory Compliance, RegTech, InsurTech

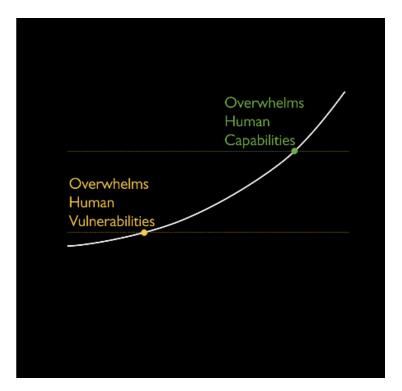
Upgrading technology but downgrading humanity

-HUMANITY Ш CHNOLOGY While we've been upgrading our technology we've been *downgrading humanity*.

Human Vulnerabilities vs. Human Capabilities

Most recent conversations about the future focus on the point where technology surpasses human capability...

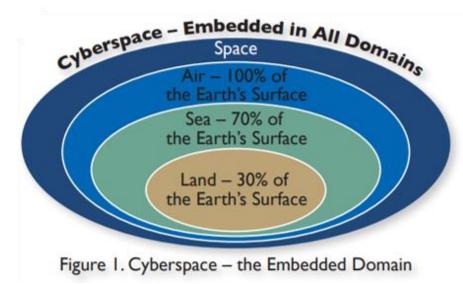
But they overlook a much earlier point where technology exceeds human vulnerabilities.

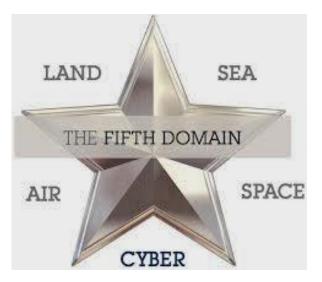


Knowns vs. Unknowns

| S | Known Knowns | Known Unknowns | | |
|----------------|--|--|--|--|
| Unknowns Known | Things we are aware of and understand. | Things we are aware of but don't understand. | | |
| | Unknown Knowns | Unknown Unknowns | | |
| | Things we understand but are not aware of. | Things we are neither aware of nor understand. | | |
| | Knowns | Unknowns | | |

Cyberspace as a FIFTH DOMAIN





» Security Intelligence





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FAK

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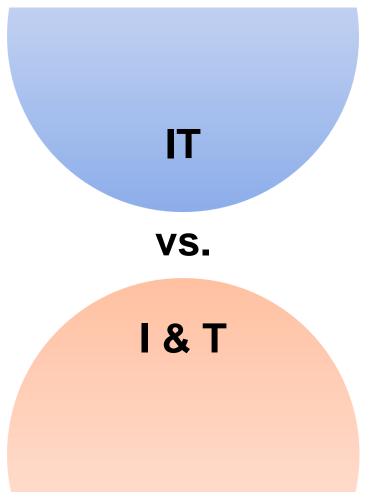
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IT Trend and challenging to business

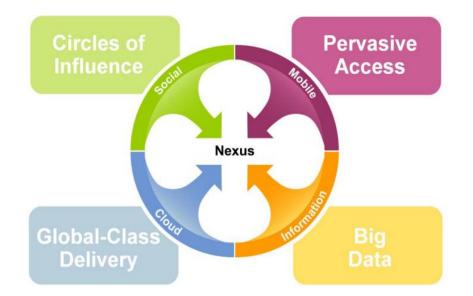


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The Four IT Mega Trends : S-M-C-I Era





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S-M-C-I : Risk or Opportunity?

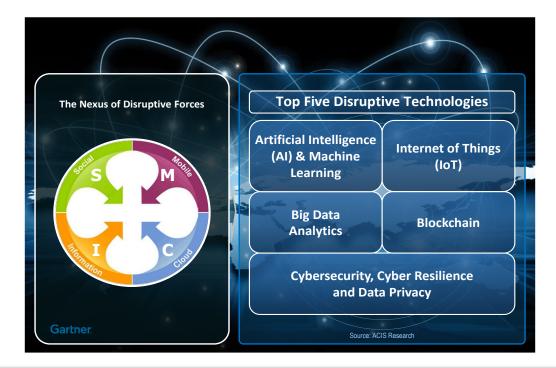




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Disruptive Technologies for Value Economy

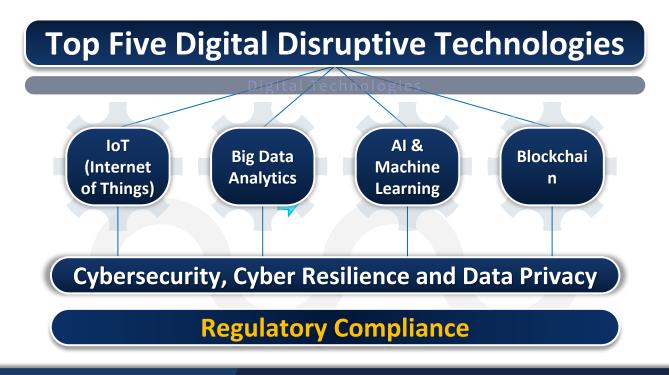




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Disruptive Technologies for Value Economy





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COVID-19 crisis shifts cybersecurity priorities and budgets

July 21, 2020 | Article

Source : McKinsey & Company

Cybersecurity technology and service providers are shifting priorities to support current needs: business continuity, remote work, and planning for transition to the next normal.



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Shifting to work-from-home arrangements can open multiple vectors for cyberattacks.



Changes in app-access rights

- Under existing policies, access to apps differs based on criticality and cyberrisk appetite (eg, data infiltration, data-protection loss), from less critical apps accessible from almost anywhere (eg, public network) to apps accessible through extranet, apps accessible only through VPN, and, ultimately, critical apps accessible only on site (eg, trading, treasury)
- Remote working can require organizations to widen access rights by enabling off-site access to some of the most critical apps, which can increase cyberrisk
- Some users might not have strong multifactor authentication, because their access rights are usually limited; change in access rights, combined with weak authentication, constitutes a further threat



Use of personal devices and tools

- Some employees may have been enabled to work from their own personal devices, but because these devices are not centrally controlled (for patching, networkaccess control, and endpoint data-protection systems), they can introduce cybersecurity vulnerabilities
- To get work done, many employees use consumergrade tools, accounts, and devices and share data over nonsecure and noncontrolled channels



Lack of social control

 Click-through rates for phishing emails and success rates of fake call-center agents can increase if employees no longer maintain a "human protection shield" by asking coworkers about suspicious emails or calls

Source : McKinsey & Company



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A dual cybersecurity mindset for the next normal

July 7, 2020 | Article



Source : McKinsey & Company

As companies extend commitments to remote workforces, cybersecurity teams need to address new risks while helping create business value in the next normal.



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Chief information-security officers must balance two priorities to respond to the pandemic: protecting against new cyberthreats and maintaining business continuity. Four strategic principles can help.

Source : McKinsey & Company



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To secure the next-normal business environment for value creation and growth, cybersecurity leaders will need to take effective action in four priority areas.

Next-normal attributes

| Actions to take | Secure workforce in new ways of working | Secure customer journey through digital shift | Rethink supply chain and third-party risk | Sustain increased sector collaboration | |
|-----------------|---|--|--|--|------------------|
| Key levers | Dynamic security Cloud-based tools and infrastructure People defense "Contact aware" work- force privacy Remote cybersecurity operating model and talent strategy | Frictionless customer experience At-scale digital channels Privacy by design Advanced analytics | Risk-tiered and expanded coverage Updated third-party security assessment Joint cyberresilience and monitoring Secure partner collaboration Plan for geopolitical challenges | Sustained increased sector- wide information sharing Industry-level initiatives to reduce barriers and secure digital shift Source : McK | (insey & Company |



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Word Economic Forum | Global Risks Report



Global Risks Landscape

How do the respondents perceive the impact \uparrow and likelihood \rightarrow of global risks?

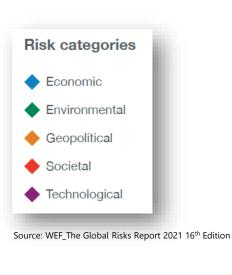


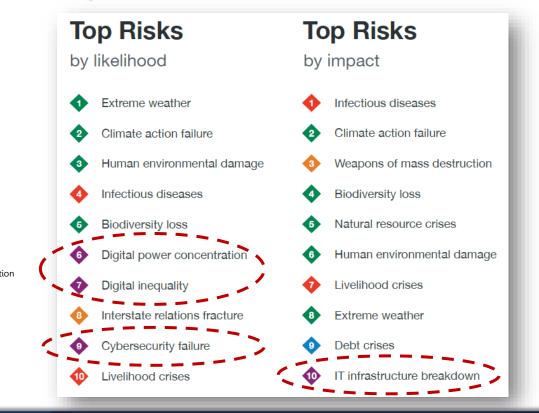


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Global Risks Landscape







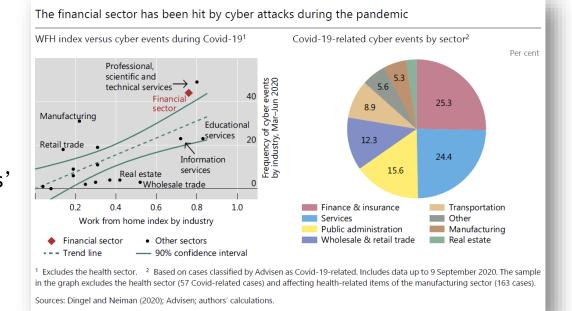
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Covid-19

Remote working and Changes in the cyber threat landscape

Mass migration to WFH can make financial institutions' staff more vulnerable



BIS Bulletin No 37: Covid-19 and cyber risk in the financial sector https://www.bis.org/publ/bisbull37.pdf



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Covid-19

Remote working and Changes in the cyber threat landscape

Working from home (WFH) opens up new possibilities for cyber attacks¹ Cyber attacks increased during the Covid-19 period, WFH overpowers VDI/VPN processes and business Policies to reduce risks with differences across financial firm types² continuity plans³ Per cent 0.35 and evel to financial stability 60 Insurers scanning a er activity l Payments 0.30 Credit unions. 45 cyber Change in suspicious ow-sophistication cyb Policymakers and 0.25 30 Commercial Lenders banks businesses are actively Securities & 0.20 15 investments Community banks 0.15 working together to 0.3 0.4 0.5 0.6 Staff working from home Business continuity IT plans overpowered the VDI/VPN were not prepared for a Change in overall malicious phishing long-term, at-home workforce process mitigate cyber risks and Securities & investments Commercial bank Credit union Community bank their systemic Insurance Payments Lender - Average implications BIS Bulletin No 37: Covid-19 and cyber risk in the financial sector https://www.bis.org/publ/bisbull37.pdf

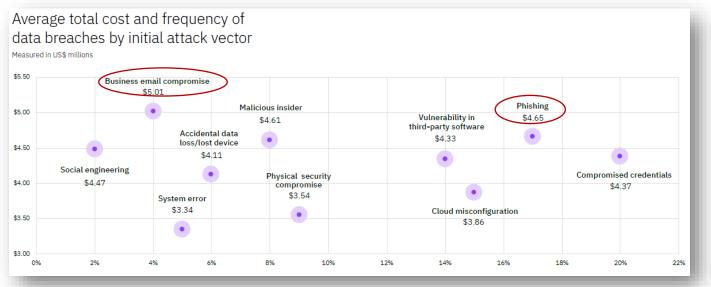


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The data breach lifecycle took a week longer

In 2021 it took an average of 212 days to identify a breach and an average 75 days to

contain a breach, for a total lifecycle of <u>287 days</u>



IBM Security: Cost of Data Breach 2021 Report



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2020 This Is What Happens In An Internet Minute





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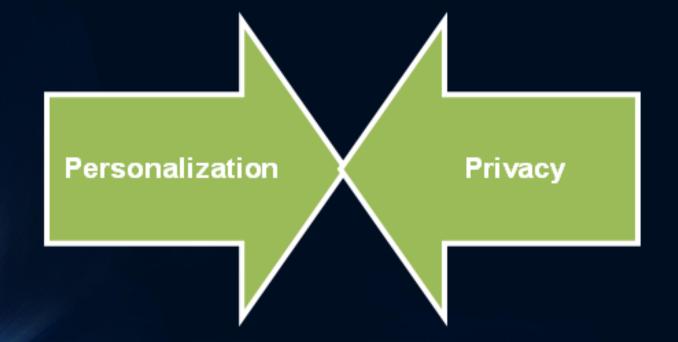




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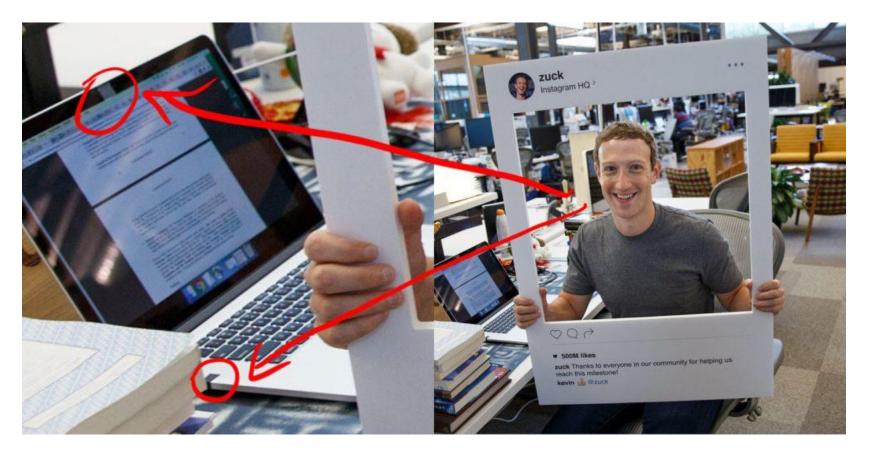
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Personalized Marketing vs. Customer Privacy

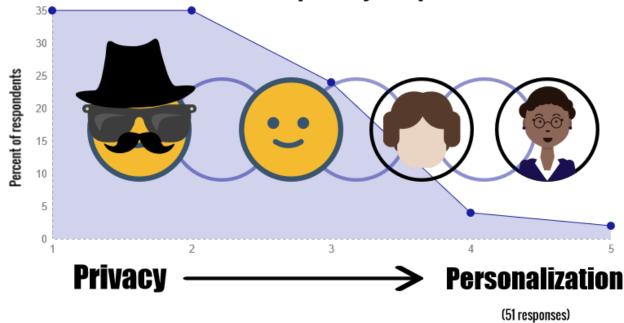




Mark Zuckerberg @ Facebook HQ



In terms of the services libraries provide, and given that two options are not always mutually exclusive, where would you fall on the spectrum of **privacy vs. personalization?**



Credit https://news.minitex.umn.edu/news/2020-07/one-second-poll-results-privacy-vs-personalization

Pre-Internet Marketing vs. Digital Marketing

| Pre-Internet Marketing | Digital Marketing | | |
|---|---|--|--|
| Name Birthday Phone number Address | Name Birthday Phone number Address | | |
| | Online Identifier Internet Protocol Address Heatmap, screen recording with mouse movement Type of device, device ID, location Cookie (i.e., session cookie, persistent cookie, secure cookie, Google analytics cookie, third-party cookie) | | |

Credit : https://www.medium.com

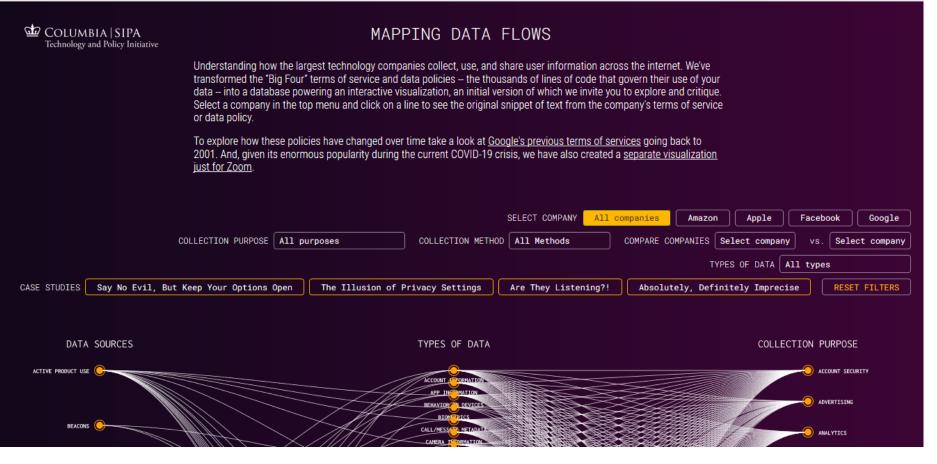


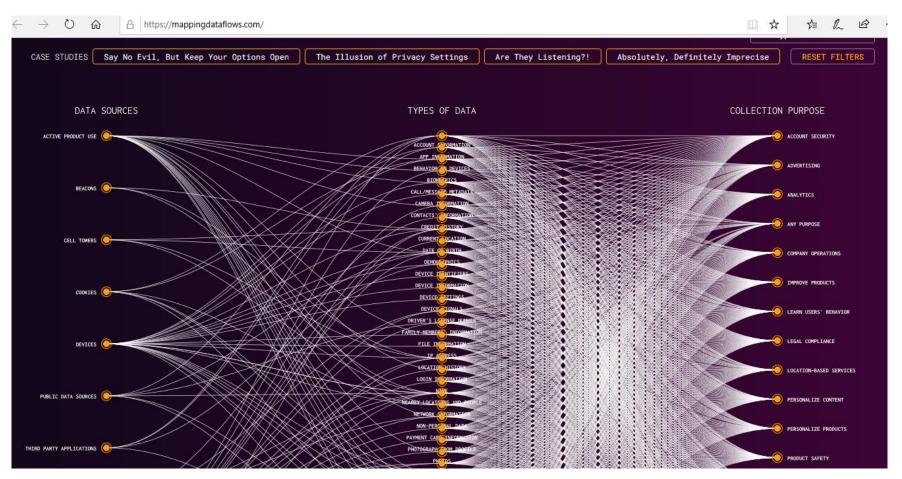
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App Tracking Transparency

ทำ Meta (Facebook) Youtube Twitter Snapchat

สูญเสียรายได้กว่า **3.2 ล้านล้านบาท** ไตรมาส 3 - 4 (ปี 2021)

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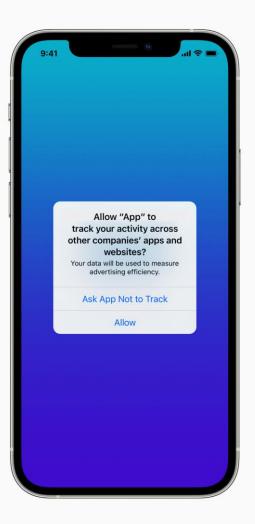
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iOS 14 .5 App Tracking Transparency คืออะไร ใช้ยังไง







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Entrusting Digital Provenance, **Digital Identity and Privacy Tech**

Top Ten Cybersecurity & Privacy Threats & Trends 2020-2022

Prinya Hom-anek, CISSP ACIS Professional Center / Cybertron















1. Cyber Fraud with a Deepfake

(Cyber Fraud with the Deepfake and the Dark side of AI)

2. Beyond Fake News

(It's a Real News based-on a True Story that intentionally attack someone/some organization)

3. Cyber Sovereignty and National Security Issues in the Long Run (That include rising in state sponsor attacks; Data Sovereignty: What's Next for Data Privacy)

4. 'Cyberattack and Data Breach': A New Normal in Cybersecurity (Cybersecurity Mindset of Top Managements need to be changed)

5. Tighten in Cybersecurity and Data Protection Regulatory Compliance (Focus on Cyber Resilience, Data Governance, Data Sovereignty when Value Preservation is crucial topic)

Source: ACIS / Consulting and Training Services

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- 6. "Data Breaches" as Top Concerns for Business (Zero Day Exploitation, Cloud Misconfigurations including Human Errors/Digital Footprint in the Clouds)
- 7. Orchestration & Automation Boosting Security Staff Effectiveness (From MSSP to MDR, Using AI and Automation to improve IR Capability)
- 8. Increasing on Impact of State-Sponsored Cyberattacks (Cyberattack on Critical Infrastructure for example Energy Grids are at risk)

9. The Cybersecurity Skills Gap Crisis (More CISOs Earning a Seat at the Table)

10.5G Networks require New Approaches to Cybersecurity (EU Report Highlights Cybersecurity Risks in 5G Networks: Securing the Transition to 5G)

Source: ACIS / Consulting and Training Services

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1. Personalized Marketing vs. Data Privacy

(Unlocking the Privacy Paradox, Upgrading Technology but Downgrading Humanity)

- 2. Soft Power from using half-truths in the Social Media Era (From "Fake News" to "Infodemic" and "Disinfodemic", Fact-Checking in a Superficiality Society)
- 3. Rethinking the Future of Cyber Sovereignty and Data Sovereignty (If it's free online, you are the product, not the customer. The implications of filter bubbles in social media and the impact on the society)
- 4. The Age of Data Governance/Information Governance/Data-Driven The Rise of Identity-Centric Security (Back to the basic, Start from Data/Information Management)
- 5. Built-in Security & Privacy in Agile Processes, ModelOps, MLOps and DevOps (Security by design as with privacy by design, From Digital Transformation to Al transformation)

42

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Source: ACIS-Cybertron Research LAB Cybersecunty Awareness for Board All rights reserved. Consulting & Training Services : Digital Technology, IT-GRC, Cybersecurity, Privacy and Regulatory Compliance

- 6. Enterprise Data Leaks and Cloud Breaches are the Next Normal (Clouds Are Secure: Are You Using Them Securely?: IaaS, PaaS, SaaS, Cloud-as-a-Service, XaaS)
- 7. The Return of Shadow IT/ The Rise of BEC (Business Email Compromise) (CIO's worst nightmare, It's time to do "Cybersecurity Awareness Training and Cyber Drill for non-IT)
- 8. GDPR/PDPA Compliance vs. Risk of Exposing Your Digital Footprint
 - (Social Media as an Attack Vectors for Cyber Threats/ Data Privacy Implosion)
- 9. Al Inclusion and Al with Ethical Dilemmas

(Weaponized AI Propaganda Machine, When ML meets Privacy and How To Combat The Dark Side Of AI)

10. Cyber Insurance becomes Mandatory for Enterprises/Companies

43

(Mandatory Cyber Insurance backed to improve Cyber Incident Response)



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Top Ten Cybersecurity & Privacy Threats & Trends 2022



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Top Ten Cybersecurity & Privacy Threats and Trends 2022

1. Digital Inequality and Cyber Vaccination

2. Supply Chain Cyber Attacks and CMMC (Cybersecurity Maturity Model Certification)

45

3. Work From Home/Remote working Challenge and Zero Trust Architecture Implementation Issues

4. Rising of the Next Generation Triple Extortion Ransomware

5. Identity is the New Perimeter , The need to prevent Identity Theft/Sensitive Data Exposure



Source: ACIS-Cybertron Research LAB Cybersecurity Awareness for Board All rights reserved. Consulting & Training Services : Digital Technology, IT-GRC, Cybersecurity, Privacy and Regulatory Compliance

Top Ten Cybersecurity & Privacy Threats and Trends 2022

- 6. Cybersecurity, Data Privacy and Data Protection are Not Just a Technical Problems
- 7. Cyber Insurance Challenges : Myths, Misconceptions and Terminations
- 8. Living in Post COVID-Era : "Data Resiliency" is a MUST-Have From a VUCA world to a BANI world , Are We Secured to Are We Ready?
- 9. High Demand of Data Breach Coach and Proactive Incident Response
- 10. The Important of Strong Cybersecurity Culture and Top Management Leadership in Cybersecurity Execution

46



Source: ACIS-Cybernon Research LAD Cybersecurity Awareness for Board All rights reserved. Consulting & Training Services : Digital Technology, IT-GRC, Cybersecurity, Privacy and Regulatory Compliance

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UPCOMING TRENDS OF CYBER ATTACK "TRIPLE EXTORTION RANSOMWARE"



Credit : https://sensorstechforum.com/

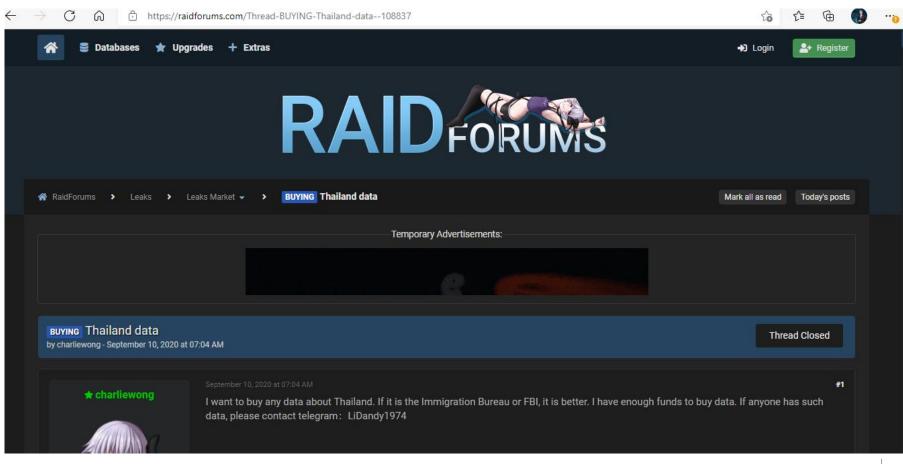
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The Return of Ransomware and their TRIPLE attacks



Some organizations that received ransom demands have already paid to retrieve data, in sums not exceeding 1 million baht (\$32,000), he said, adding that the total number of organizations affected was still being investigated.

The Return of Ransomware and their TRIPLE attacks

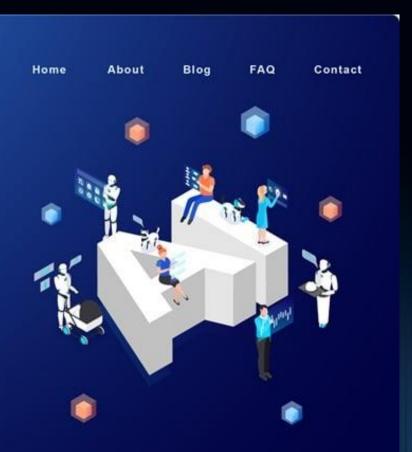


CYBERTRON

Top Trends Cybersecurity & Data Privacy 2021

"Digital Inequality"

: Al Inclusion and Al with Ethical Dilemmas





CYBERTRON

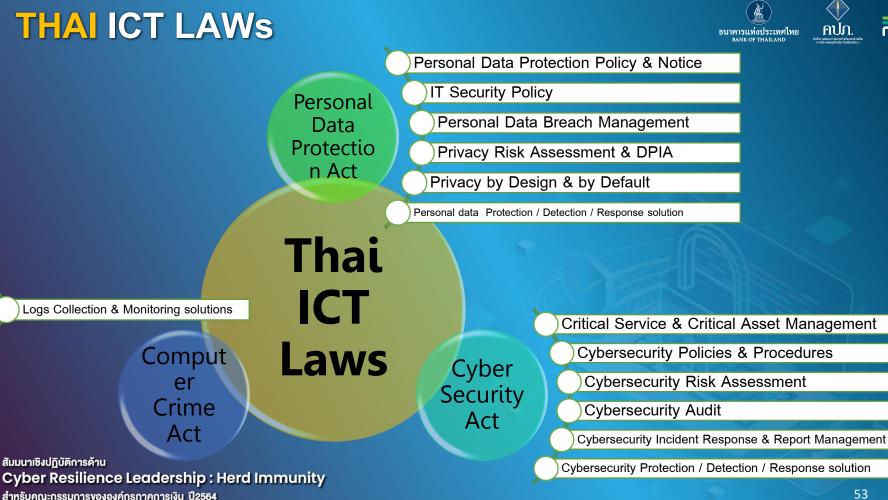






Data Resiliency The Essential of Business Recovery after Crisis





Thailand Data Protection

Guidelines





1





PDPA Step by Step

GET Compliance

- Raise Awareness
- Discover Data & Create Activities Inventory
- Define PII & SPII
- Clarify Lawfulness of processing
- Conduct Risk Assessment & Gap Assessment
- Develop Procedure & Form & Template
- Review and Revise Contract & Consent
- Assign DPO (Insource or Outsource)
- Provide IT system for E-Consent / Consent Management / Cookie Scanning

GET Secure (IT Solution)

- Conduct Vulnerability Assessment & Penetration
- Testing & Cyber Attack Simulation
- Review Firewall Rule & Configuration
- Develop IT Security Baseline
- Implement cybersecurity solutions, such as DLP, Database Firewall, WAF, PAM, FIM, APT, EDR etc.
- Create Incident Response Plan (IRP)
- Develop the process or guideline to get security by design and default
- Develop the process or guideline to get privacy by design and default
- Develop Privacy Impact Assessment Process
- Provide the discovery tool and data erasure tool for deleting over aging personal data

Stay Secure & Compliance

- Conduct PDPA Audit / IT Audit Annually
- Apply or Implement ISO/IEC 27001,
- ISO/IEC 27701 / Other Privacy Guideline
- Conduct Vulnerability Assessment &
- Penetration Testing Annually or Regularly - Exercise Personal Data Breach Process & IRP
- Manage Security Service & Privacy Breach Monitoring
- Transfer Cyber Risks with Cyber Insurance







Cyber Resilience Leadership: Herd Immunity By BOT, SEC and OIC

- Cyber Risk Management | is enterprise-wide risk & need to align with business needs
- Cybersecurity Culture | is the most effective organization vaccine to create cyber immunity
- Phishing / Ransomware / Email Compromise / DDoS | Always prepare and ready for WHEN
- Enterprise Data Leaks, Cloud Breaches & Supply Chain Attacks | are the Next Normal
- Regulation Compliance (Cybersecurity Act & GDPR/PDPA Compliance) | may cause the money but also help to create cyber resilience & reduce cyber risks

สัมมนาเซิงปฏิบัติการด้าน Cyber Resilience Leadership : Herd Immunity สำหรับคณะกรรมการขององค์กรภาคการเงิน ปี2564

Further Reading

https://prinya.org

https://www.cdicconference.com

https://www.acisonline.net

https://www.cybertron.co.th



Thank You

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Thailand Information Security Association (TISA) www.TISA.or.th



Cyber Defense Initiative Conference www.cdicconference.com



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www.youtube.com/thehackertv

www.youtube.com/thecyber911

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