Fighting the cyber people war

A focus on the challenges for talent facing NRENs

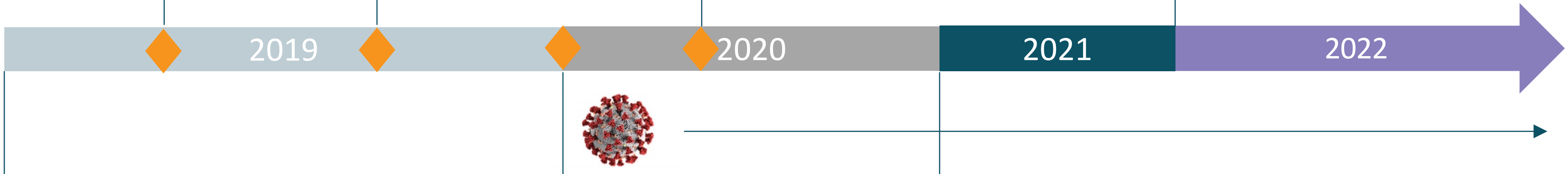
TNC23, Albania

Chris Hancock - CEO
David Wilde – CTO

AARNet and cyber security

Some background

Our journey – creating a sector focused SOC



2018

Needs analysis

University discussions

Business case preparation

March 2019

AARNet Board Approved **SOC Business Case**

May – June 2019

SIEM RFQ and **Proof of Concept (POC)**

Jan 2020

Pilot with 4 Universities

September 2020

Production / Go-Live SOC Service

LogRhythm and Exabeam

Available outside of Pilot Universities

2021

MISP (Threat Intelligence Sharing)

XSOAR (Case Management)

On-Call Automation

Spike Analysis

2022*

SIEM Re-evaluation

Increased Retention

IT Ops Logs Foundation Capability

XSOAR (Playbooks)

* Subject to change

A SOC for Higher Education

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AARNet's Unique Position

Mitigates Risk in Real-Time

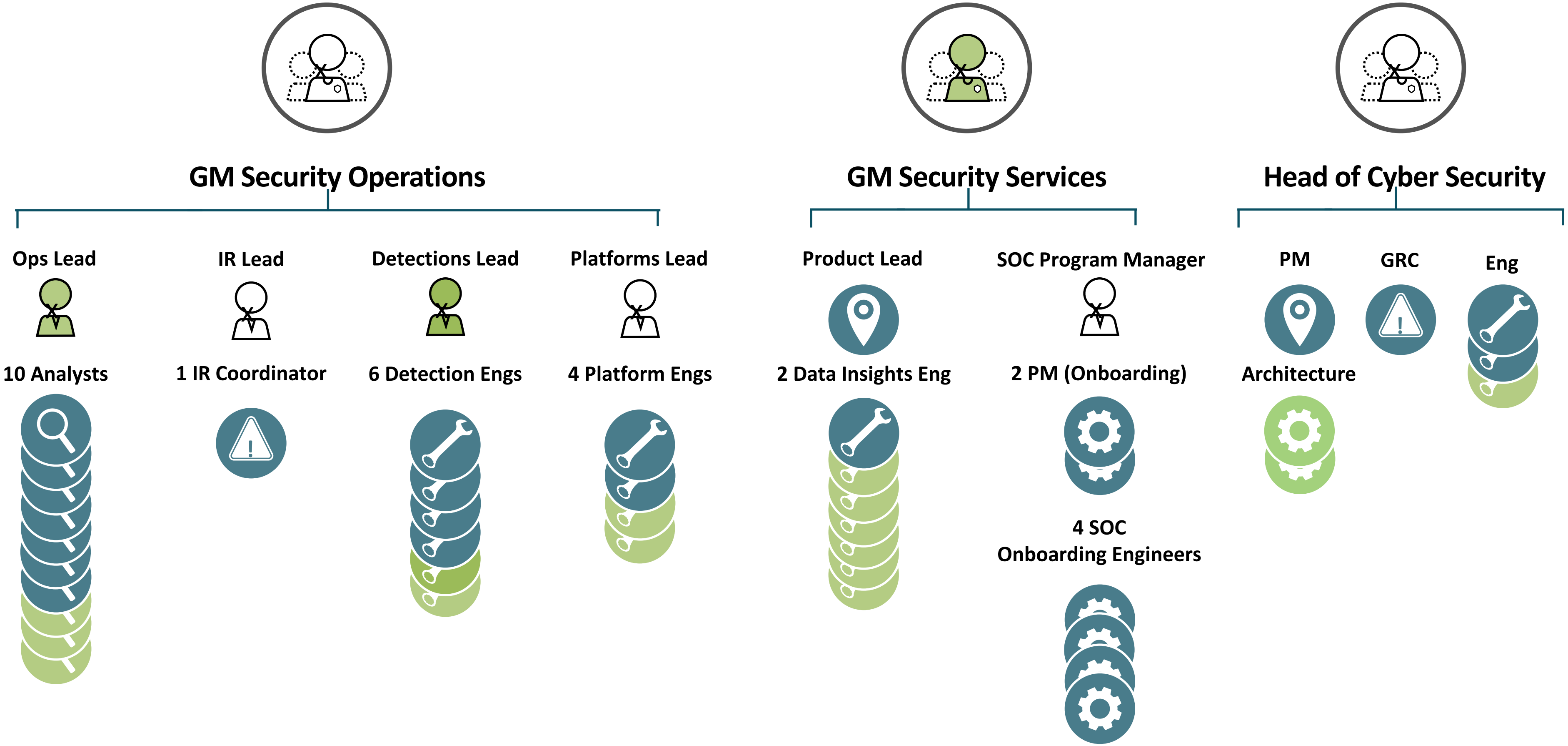
SOC + DDoS + ISP

Sector Focused

Transparent Security

Common Team

Cyber Security Team – 2023-2024



GM Security Operations

Ops Lead

10 Analysts

IR Lead

1 IR Coordinator

Detections Lead

6 Detection Engs

Platforms Lead

4 Platform Engs

GM Security Services

Product Lead

2 Data Insights Eng

SOC Program Manager

2 PM (Onboarding)

4 SOC
Onboarding Engineers

Head of Cyber Security

PM

Architecture

GRC

Eng

Sector Focused

AUSCERT

REN-ISAC

ACSC Australian Cyber Security Centre

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OmniSOC

CANSSOC

AHECS AUSTRALASIAN HIGHER EDUCATION CYBERSECURITY SERVICE (AHECS)

Jisc

NextGen Stack

aarnet

XSOAR

exabeam

CROWDSTRIKE

1000+ Modelled Behaviours + End-to-End Automation + 100% Transparency

Predictable Cost

Unlimited Logs

2 Year Storage

Fixed Pricing

Enterprise Grade

>30 Billon Events Per Day (60TB of logs /day)

Full Disaster Recovery

24x7 Coverage

A changing threat landscape

Optus hack to cost at least $140 million

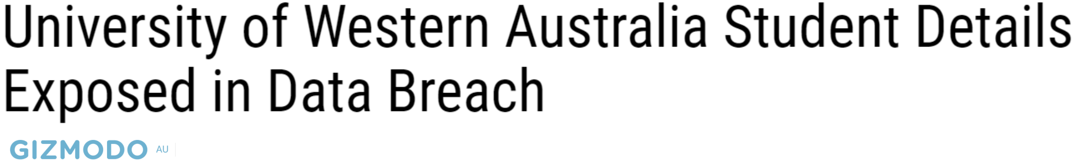
The Sydney Morning Herald

Medibank faces $1 billion bill as hackers release 1500 more sensitive records

The Sydney Morning Herald

Royal ransomware claims attack on Queensland University of Technology

BLEEPINGCOMPUTER



University of Western Australia Student Details Exposed in Data Breach

GIZMODO AU

Increased awareness and fatigue

More reporting

More questions

Increased budgets

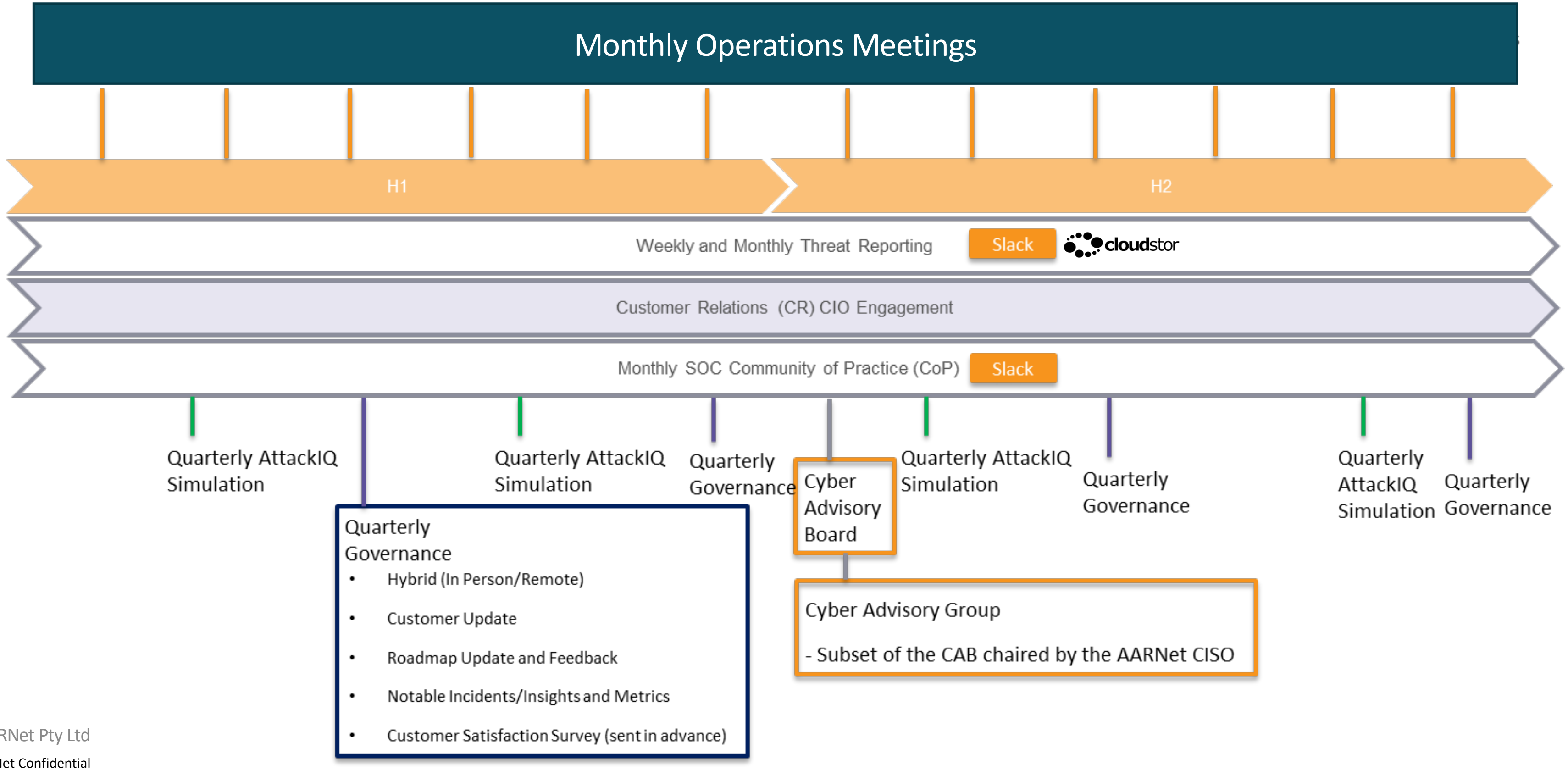
Security training and awareness

More security controls

Higher demand

Example: high customer engagement

Weekly, monthly, quarterly, annual touch-points to maintain



Monthly Operations Meetings

Weekly and Monthly Threat Reporting Slack cloudstor

Customer Relations (CR) CIO Engagement

Monthly SOC Community of Practice (CoP) Slack

Quarterly AttackIQ Simulation

Quarterly Governance

- Hybrid (In Person/Remote)
- Customer Update
- Roadmap Update and Feedback
- Notable Incidents/Insights and Metrics
- Customer Satisfaction Survey (sent in advance)

Quarterly AttackIQ Simulation

Quarterly Governance

Cyber Advisory Board

Cyber Advisory Group

- Subset of the CAB chaired by the AARNet CISO

Quarterly AttackIQ Simulation

Quarterly Governance

Quarterly AttackIQ Simulation

Quarterly Governance

The challenging environment

How to attract and retain good people

Global Tech Attrition – circa 23% and rising

23%+

High Tech outpacing other verticals

LinkedIn & Forbes 2023

Intention to Stay

Global: 29%
Europe: 39%
Latin America: 27%
ANZ: 24%
Asia: 19.6%

Gartner 2023

Value Prop

65% may change mind and stay if Flexible Work & ESG focus is high

Gartner 2023

Age

- 18-29yrs 20% chance to stay
- 40-70 yrs 48% chance to stay

Gartner 2023

Shortage

US: 25%
Europe: 43%
India: 39%

Forbes 2023

War

Circa 70-100K high tech ees disrupted

Forbes 2023

Tenure

High Tech median now 1-2 yrs

LinkedIn 2023

Downturn

Not a cure
Bank talent now
Super charged exit

Gartner 2023

Post Covid Attrition @ AARNet

2022

- AARNet attrition 16% *(30 ees)*
- Tech Industry average 17.2% *(down from 21.7% in 2021)*
- Cost to AARNet: Circa $2.5M

Why?

- 40% left for higher $ & promotion
- 26% involuntary
- 7% returning to previous industry
- 13% moving IS/OS – Family
- 13% dissatisfied with AARNet

Where From?

Operations	12
Customer Relations	7
Cyber Security	5
Applications and Architecture	3
IDG	3

2023 YTD

- AARNet attrition 5% *(9 ees)*
- Tech Industry average 18-22% *(predicted)*
- Cost to AARNet: Circa $700K

Why?

- 44% left for higher $ & promotion *(2022 46%)*
- 22% involuntary *(2022 26%)*
- 11% returning to previous industry *(2022 7%)*
- 11% moving IS/OS – Family *(2022 13%)*
- 11% dissatisfied with AARNet *(2022 13%)*

Where From?

IDG	3
Cyber Security	2
Operations	2
Customer Relations	1
Legal	1

It’s a Jungle Out There

Poachers

⇩

Increasing $ + Tight Market + Poacher Behaviour

Vs

Gamekeepers

⇩

Lift the bar everyday or you’ll get left behind

Analyse and Strategise now: You CAN be ahead of this

It’s a Jungle Out There

Poachers

- Big $$ (+ 20-40%) & big landscapes
- Selling the instant fix to 20-35 year olds
- Pumping up egos & dreams
- Weighting potential heavily against ability
- Junior Staff going to senior roles that they are not ready for
- Capitalising on Covid fatigue
- Catastrophising the challenges of current hybrid model
- Not just the big players: start up’s, boutique firms, security, security, security

⇩

Increasing $ + Tight Market + Poacher Behaviour

=

The Perfect Career Storm is Brewing

Vs

Gamekeepers

- Excellence in all aspects of Employee Lifecycle
- Engagement is critical
  - Policy Platform
  - Hybrid work
  - Culture
  - ESG focus
  - Diversity & Inclusion
- Societal currency – your ‘WHY + HOW’
- Authenticity at every level and in every interaction
- These are not ‘differentiators’ – they are your ‘Ticket to Play’

⇩

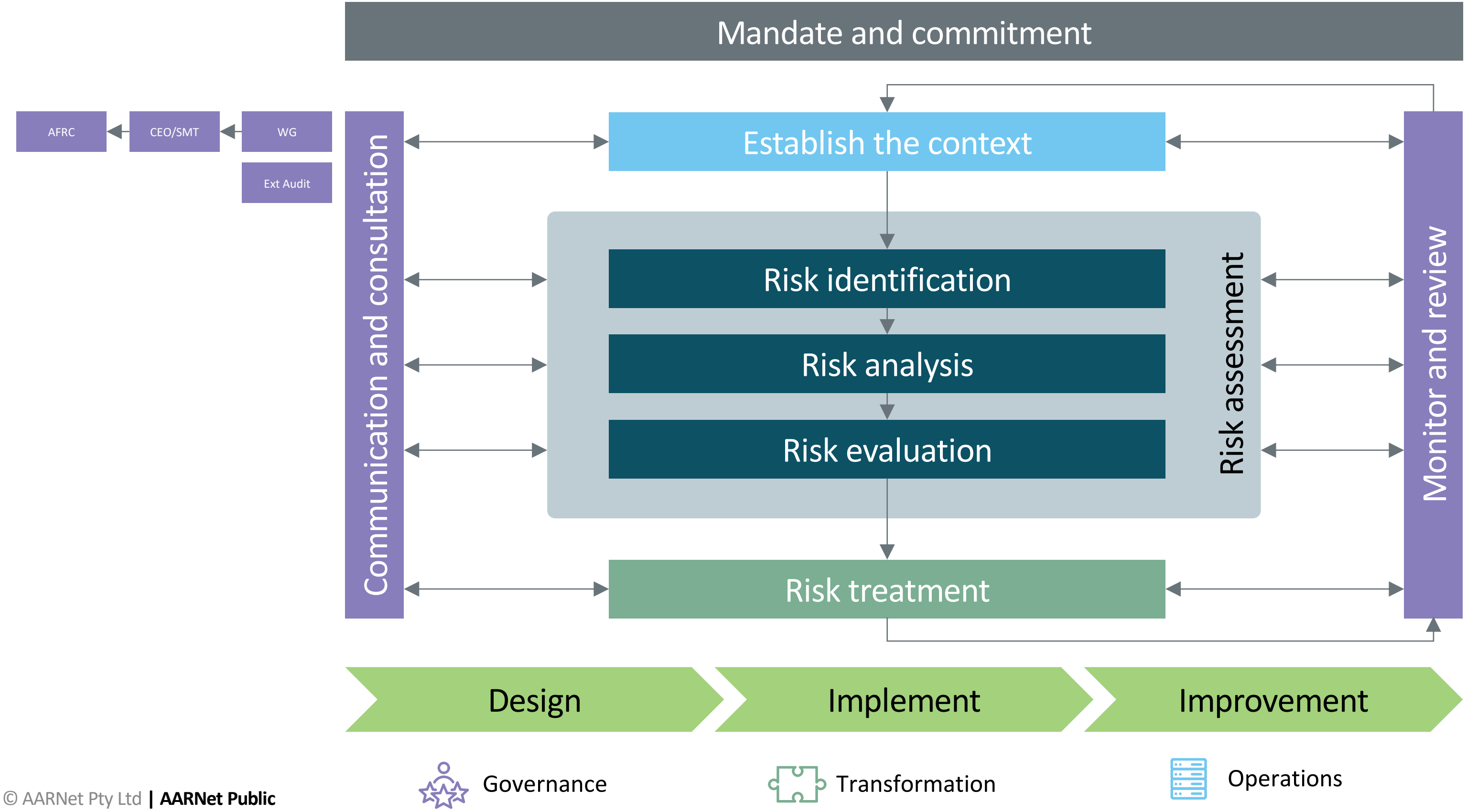
Lift the bar everyday or you’ll get left behind

Analyse and Strategise now: You CAN be ahead of this

A way forward

Strategies from the AARNet cyber team

Strategy one – lead with risk and ‘top down support’



Subject to change

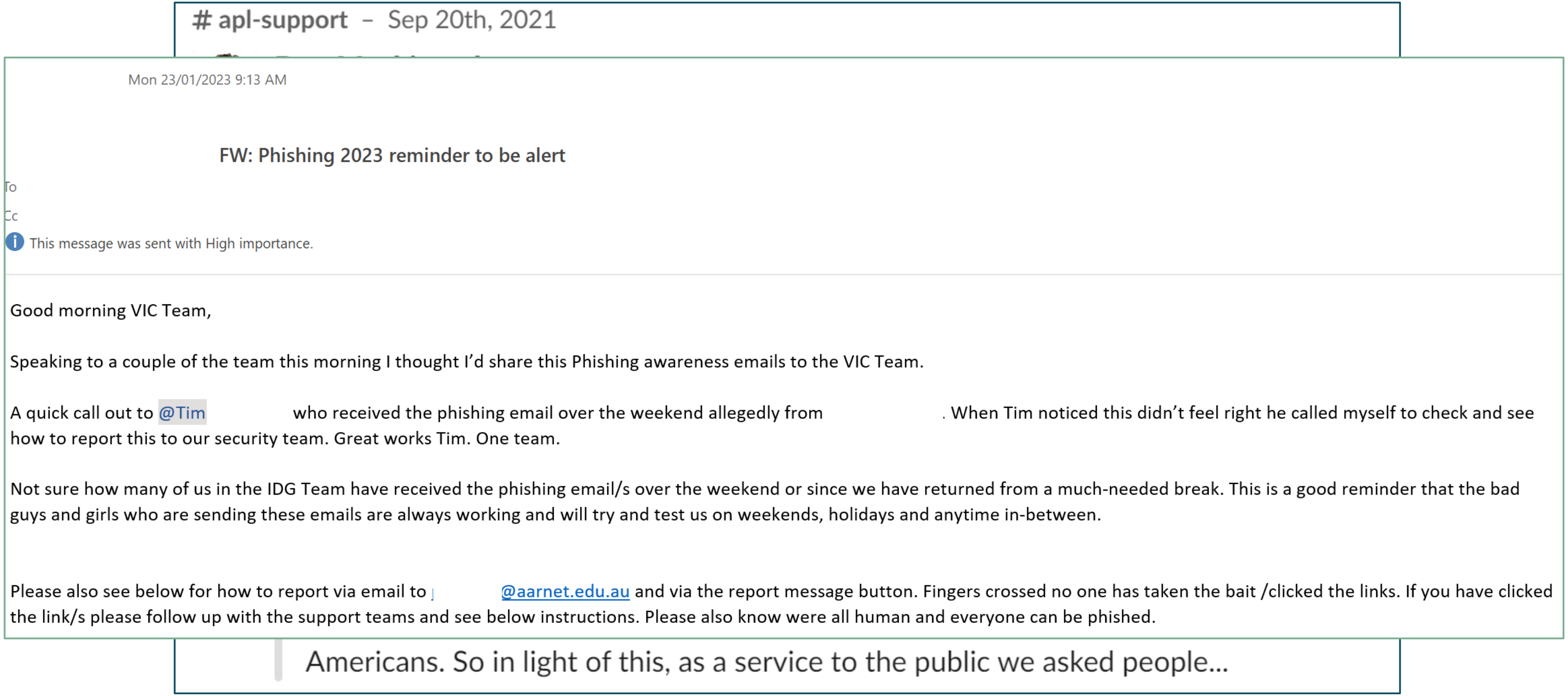
Strategy two – shifting left

Policies and standards

Security testing and checks

Guidance, advice and support

Strategy three – identify champions



apl-support – Sep 20th, 2021

Mon 23/01/2023 9:13 AM

FW: Phishing 2023 reminder to be alert

To

Cc

This message was sent with High importance.

Good morning VIC Team,

Speaking to a couple of the team this morning I thought I'd share this Phishing awareness emails to the VIC Team.

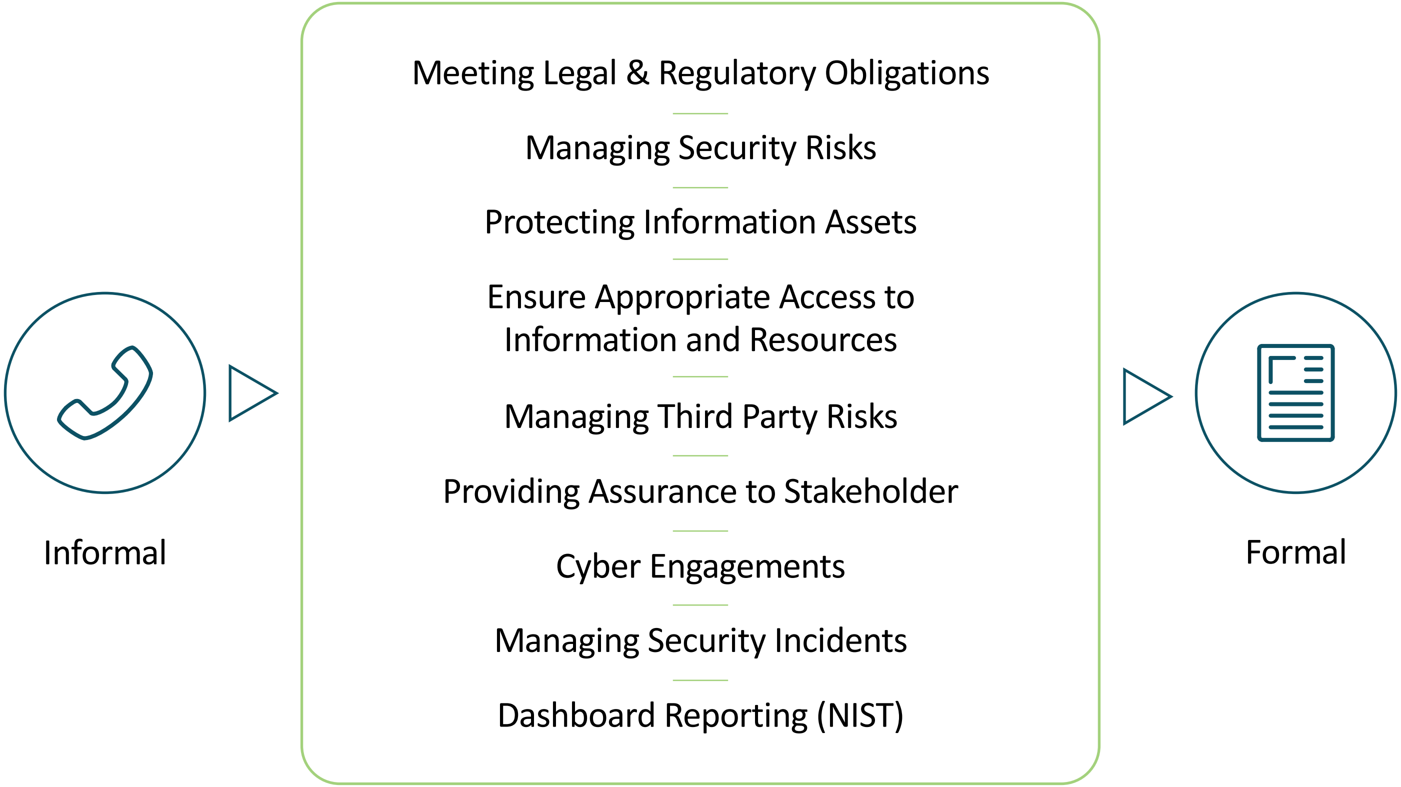
A quick call out to @Tim who received the phishing email over the weekend allegedly from . When Tim noticed this didn't feel right he called myself to check and see how to report this to our security team. Great works Tim. One team.

Not sure how many of us in the IDG Team have received the phishing email/s over the weekend or since we have returned from a much-needed break. This is a good reminder that the bad guys and girls who are sending these emails are always working and will try and test us on weekends, holidays and anytime in-between.

Please also see below for how to report via email to @aarnet.edu.au and via the report message button. Fingers crossed no one has taken the bait /clicked the links. If you have clicked the link/s please follow up with the support teams and see below instructions. Please also know were all human and everyone can be phished.

Americans. So in light of this, as a service to the public we asked people...

Strategy four – reporting, metrics & communication



Informal

Meeting Legal & Regulatory Obligations

Managing Security Risks

Protecting Information Assets

Ensure Appropriate Access to Information and Resources

Managing Third Party Risks

Providing Assurance to Stakeholder

Cyber Engagements

Managing Security Incidents

Dashboard Reporting (NIST)

Formal

Strategy five – security, usability and automation

Example 1 – Passwords/passphrases

Scenario: Human fatigue when users need to remember numerous or complex passwords

Behaviours:

- Store them insecurely (e.g. post-it note)
- Password re-use
- Increased service management and frustration (e.g. locked accounts, forgotten passwords)

Response:

- Increase password length/complexity but increase the expiry period
- Target security controls for privileged accounts or protected network segments (as opposed to 'ALL')

Example 2 – automate to remove the human and manual effort

Scenario: We have to swivel chair across systems to collate data points to support security incident investigations

Behaviours:
Increased time to investigate

Response:
Utilise technology to bring the data points into a single pane of glass (SPOG) so a determination can be made and remedial action undertaken

Subject to change

A way forward

AARNet HR strategies

Your Action Plan

Acquire

- Review & uplift recruitment process
- Interview tools
- Set tasks
- Create Alternate pathways: Secondary School Work Experience; Graduate Programme; Cyber Academy
- Diverse education and skills acquisition

Delight

- Great offer
- Highlight benefits
- Seamless HR onboarding
- Buddy system
- Team engagement – they should never feel 'alone'
- Immediate meaningful work
- Thank You for choosing US!

Engage

- Meaningful policies
- Open & collaborative culture
- Trust: Give licence to fail – tap their best creativity
- Diversity & Inclusion strategies
- L&D: Interest in the individual
- We Value You!

Retain

- Continual improvement of policies & Culture
- Communication at many levels
- Weekly 1:1 management touch point
- Focus on individual – not just tangible work
- Unexpected support
- Recognition

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Thank You