



# StarHub Investor Day Presentation to Analysts

Ensign InfoSecurity  
*28 November 2023*



About Ensign InfoSecurity



# Largest end-to-end pure-play cybersecurity services company in APAC with deep expertise

## MISSION:

*To secure the Cyberspace of Enterprises, Sectors and Nations through World-class Expertise and Innovative Technologies*

**TRUSTED CYBERSECURITY  
PARTNER FOR GOVERNMENT  
AND ENTERPRISES**

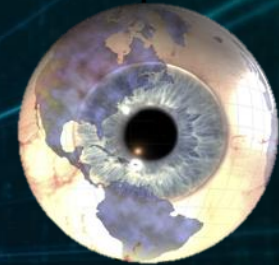


Launch of Ensign InfoSecurity by (L to R): Teo Chin Hock, Chia Song Hwee, Lee Fook Sun, SM Teo Chee Hean, Dilhan Pillay, 2PS Joseph Leong, Yeoh Keat Chuan

**R&D-FOCUSED TO DEVELOP  
INNOVATIVE,  
END-TO-END CAPABILITIES**



**BUILDING  
LOCAL EXPERTISE WITH  
GLOBAL EXPOSURE**



# A management team dedicated to expansion of cyber resilience capabilities in Asia

## Leadership for Global Growth



**Lee Fook Sun**, *Chairman*

- Former Deputy CEO of ST Engineering & President of ST Electronics
- Former Director of Joint Intelligence Directorate; Brigadier General in the SAF



**Tan Ah Tuan**, *Head of Ensign Labs*

- Held leadership roles in DSTA in Singapore as the Group Technology Officer, Director of Cybersecurity and Chief IT Security Officer
- Experienced in developing info communications infrastructure and cybersecurity capabilities



**Diana Tan**, *Chief Legal Officer and Head of Corporate Functions*

- Former Head of Legal at ST Electronics and Pavilion Energy
- Admitted as Advocate & Solicitor of the Supreme Court of Singapore and called to the English Bar



**Lim Minhan**, *Head of Consulting*

- Led the cyber response and OT security professional services in one of the big 4 consultancy firms
- Held management positions at SAF and was involved in strategic planning, policy-drafting and operations in the cyber domain



**Paul Tan**, *Head of Systems Integration*

- Former Director at DSTA with over 25 years of experience in cybersecurity
- Led various teams in design, development and implementation of large-scale cybersecurity solutions and systems



**Tammie Tham**, *Group CEO*

- Former CEO & Founder, Accel Systems & Technologies, a cyber systems integrator
- Held leadership positions at various technology MNCs



**Charles Ng**, *Head of International Business*

- Former Director & Head of Cyber Security in APAC for Booz Allen Hamilton
- 6 years in Singapore's Public Sector
- Involved in the formation of the Cyber Security Agency of Singapore



**Gaurav Keerthi**, *Head of Advisory and Emerging Business*

- Former Deputy Chief Executive (Development) in the Cyber Security Agency of Singapore
- In his role covering International Cyber Policy, Operational Readiness, and Engineering, he oversaw Cybersecurity capability and ecosystem development for Singapore



**Steven Ng**, *Chief Information Officer*

- Former Director of Threat Intelligence Group in the Defence Cyber Organisation
- Held leadership positions in technical operations and strategic analysis groups in the Military Intelligence Organisation

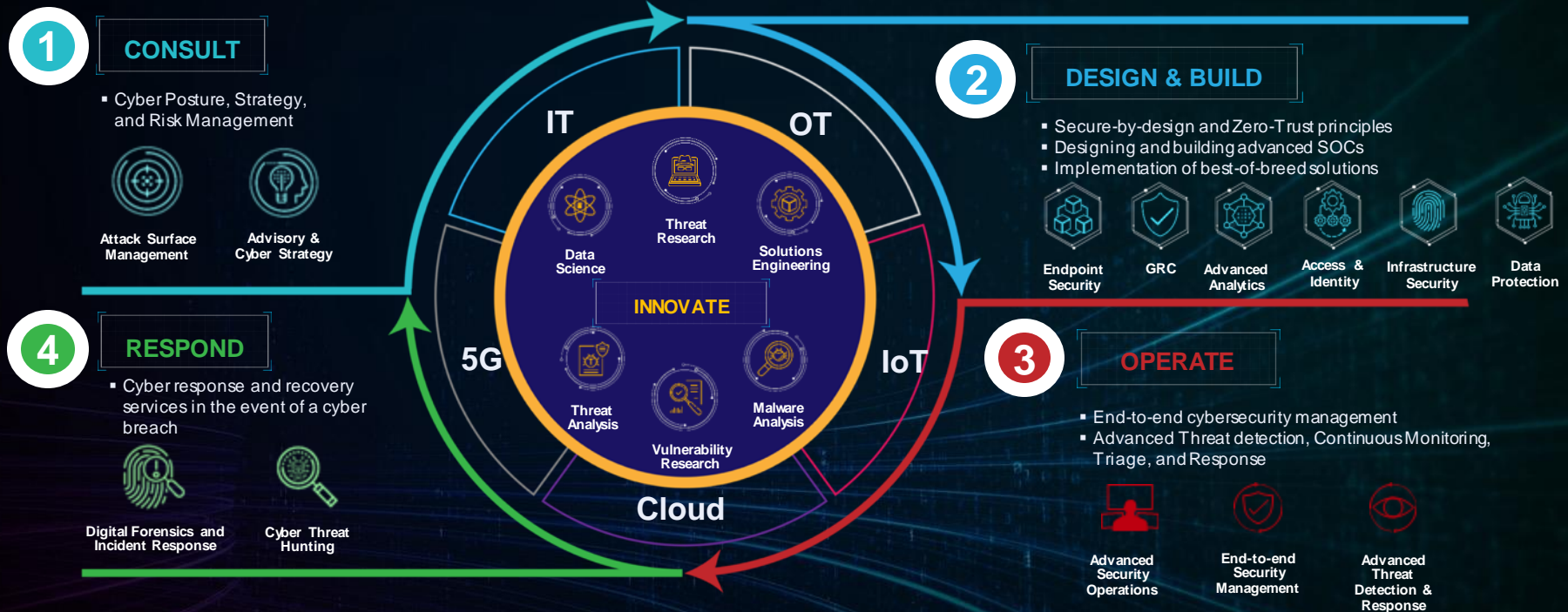


**Chua Zong Fu**, *Head of Managed Security Services*

- Former Partner in a Big 4 consultancy firm with more than a decade of experience in Cyber Incident Response & Forensics
- Former R&D lead at an Israeli defence subsidiary specialising in zero-day malware detection and cyber attack attribution

# Asia's largest cybersecurity services company with an end-to-end offering

Ensign serves as the single point of accountability for any client with any cybersecurity need





Ensign is based in Singapore, with a fast-growing regional footprint.

### International Client Footprint



# Our Achievements in the last 5 years



Employees have grown to **870** across all markets where we operate



Offices have grown from 3 to 5 in the region to include Singapore, Malaysia, Hong Kong, South Korea, Indonesia and Australia



Revenue has grown more than **3X** CAGR consistently above **30%**



Customers are now served across APAC and Western Europe. More than 10 projects outside of Ensign's operating territories



Sustained R&D investment of 6-9% of Group Revenue



Developed indigenous cybersecurity solutions addressing unique problems. Apollo, Ares, Artemis, Helios, Melissa, Zeus

# Project Track Record centered around complex Solution Design, Build and/or Operate for IT / OT / IoT / Cloud Environments



## 24 x 7 Endpoint Protection Services for Client with Nationwide Operations

- Designed, built, and currently operating Security Infrastructure to secure more than 100,000 endpoints for client with nationwide operations



## 24 x 7 Cloud Security Operations Centre for Tech Unicorn

- Designed, built, and currently operating the Cloud native SOC
- Full suite of services in consulting and implementation



## AI-powered solutions for Client with Regional Footprint

- Full suite of managed security services powered by AI



## Comprehensive services for Global MNC

- Management of largest cybersecurity implementation at global scale
- 24 x 7 SOC and staff augmentation to support operations in APAC region



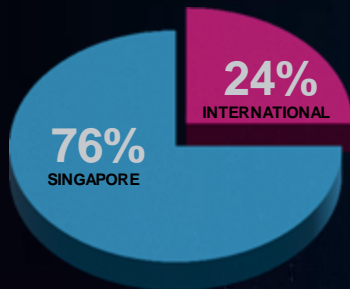
## OT Services for Leading Conglomerate

- Comprehensive security services for IT and OT environments
- Full suite of services in consulting and implementation



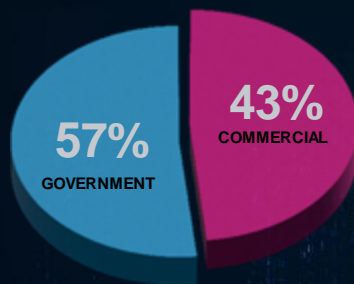
# Business Mix (2022)

### Singapore- International Mix



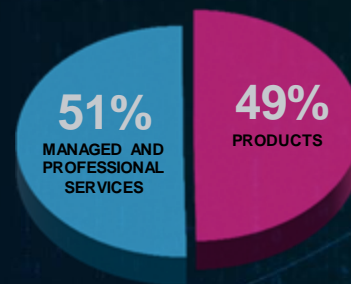
24% revenue from markets outside of Singapore

### Government- Commercial Mix



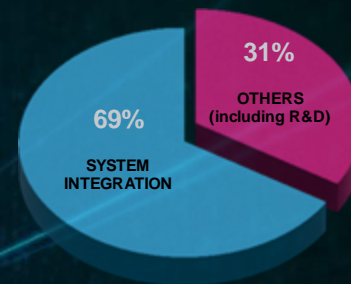
43% revenue from Commercial Sector across all markets where Ensign operates

### Product- Service Mix



51% revenue from Managed and Professional Services

### Group Revenue by Line of Business



System Integration accounts for 69% of Group Revenue



R&D and Capability Development  
Ensign's Innovations

## Ensign's modus operandi is to serve as a Trusted Advisor to our Clients

**We help  
clients solve  
problems**

1. We **understand** the threats facing organisations in Asia.
2. We have the **capability** to design and develop a diverse suite of proprietary solutions to address complex challenges.
3. We are here to **partner** each client on their long-term journey of cyber resilience against emerging threats.



# Differentiation through Innovation

Developing novel solutions that interoperate with commercial off-the-shelf solutions to enhance cyber defence

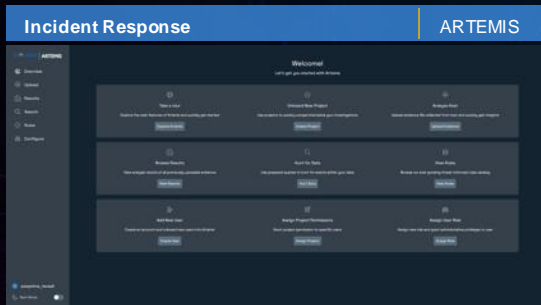
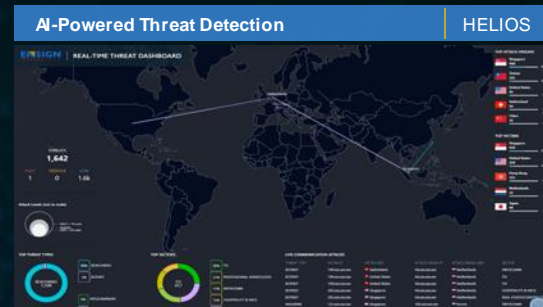
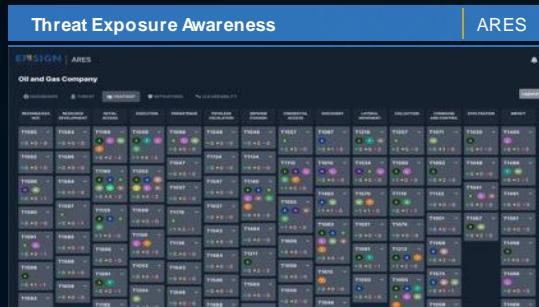


A word cloud featuring various Greek mythological figures. The words are arranged in a non-linear fashion, with some being significantly larger than others. The background is dark blue with light blue and purple diagonal lines and curved patterns. The words are: Apollo (large, blue), Helios (medium, yellow), Artemis (largest, red), ARES (medium, orange), Hermes (medium, blue), Zeus (medium, grey), Pluto (medium, blue), Melissa (medium, green), and Athena (medium, purple).

Apollo Helios  
ARES Hermes  
Pluto Artemis  
ZEUS Melissa  
Athena

# Ensign is translating our patents and IP into innovations that benefit clients

Developing novel solutions that interoperate with commercial off-the-shelf solutions to enhance cyber defence



These tech solutions are backed by patents and built in-house

# Patents and Awards

Our innovations have been recognised internationally, through patents and international conference papers

## Patents Awarded



**A DEEP EMBEDDED SELF-TAUGHT LEARNING SYSTEM AND METHOD FOR DETECTING SUSPICIOUS NETWORK BEHAVIOURS**



**A SYSTEM AND METHOD FOR DETECTING DOMAIN GENERATION ALGORITHMS (DGAs) USING DEEP LEARNING AND SIGNAL PROCESSING TECHNIQUES**



**A SYSTEM AND METHOD FOR DETECTING PHISHING-DOMAINS IN A SET OF DOMAIN NAME SYSTEM (DNS) RECORDS**

## Patent Pending

**A SYSTEM AND METHOD FOR AUTONOMOUSLY FINGERPRINTING AND ENUMERATING INTERNET OF THINGS (IOT) DEVICES BASED ON NATED IPFIX AND DNS TRAFFIC**

## Published Papers

**MalwareCLIP: Towards a Scalable and Explainable Image-Based Malware Classification**  
*IEEE CCCI 2023 Conference*

**BinImg2Vec: Augmenting Malware Binary Image Classification with Data2Vec**  
*IEEE ICAIC2022 Conference*

**TypoSwipe: An Imaging Approach to Detect Typo-Squatting**  
*IEEE NTMS 2021 Conference*

**PhishGAN; Data Augmentation and Identification of Homoglyph Attacks**  
*IEEE CCCI 2020 Conference*





# Growth Roadmap

## 3 Growth Pillars

Developing novel solutions that interoperate with commercial off-the-shelf solutions to enhance cyber defence



### Comprehensive and Complete Service Offering

Continue to serve as a Trusted Advisor and Single Point of Accountability for each Client's evolving cybersecurity needs



### Innovate

R&D investments to strengthen and supplement proprietary tech stack



### Internationalise

Grow revenue contribution from overseas markets

# Comprehensive and Complete Service Offering

Continue to act as Trusted Advisor with a Comprehensive and Complete Service Offering that acts as a Single Point of Accountability



## Differentiation through Proprietary Innovation

*Incorporation of Proprietary Elements into Complex Solution Design*



## Grow Recurring Revenue

*Increase share of revenue from Managed Services*



## Address Cybersecurity Outcomes for Underserved Segments

*Explore alternate form factors and sales channels to address cybersecurity outcomes for underserved segments*



# Innovate

Continued R&D investments to strengthen and supplement Ensign's proprietary tech stack

## Outcome-Focused Innovation



**High Impact  
Threat Detection & Hunting**



**Regional and Global Cyber Threat  
Intelligence**



**Rapid Incident Response and  
Remediation**



**Threat and Vulnerability Exposure  
Monitoring**



**Unified Visibility of Organisation's  
Digital Terrain**

## Evolving Market Trends



**Generative AI**



**Cloud-Native**



**SaaS-based solutions**



**5G**



**Cyber Supply Chain Attacks**

# Internationalise

Grow revenue contribution from international markets



## Grow International Footprint

*Expand into new markets*



## Inorganic Growth

*Pursue inorganic growth options where business conditions permit*



Thank You