



Sector lead



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# Security Industry Digital Plan

A guide for Small and Medium Enterprise (SME) in the Security sector to identify opportunities for digitalisation and adopt digital solutions to support their business needs.

# Security landscape

The Security industry provides private security services that play a crucial role in maintaining safety and security in Singapore. The Security Industry Digital Plan is designed for security agencies, security service buyers and building owners to enhance their digital capabilities and improve their overall efficiency.

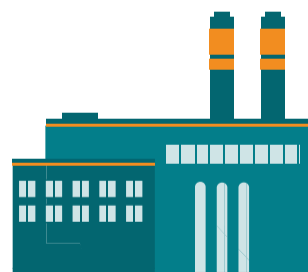


**~500 Security Service Providers**  
**~280 Security Agencies**

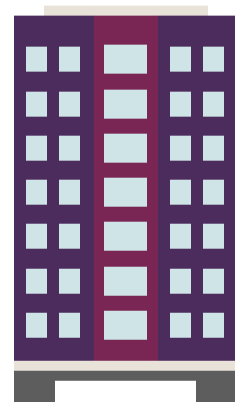


**Total workforce of ~51,000 active security officers**

## Facilities that require Security Services



**Industrial**  
**37%**



**Residential**  
**22%**



**Commercial**  
**8%**



**Educational Institutions**  
**9%**



**Government and Statutory Board Buildings**  
**9%**



**Others\***  
**15%**

# The Personas

The profiles of security services sector can be broadly represented by three personas. Each persona faces different business and technology challenges.

## Traditional Security Agency

For SMEs looking to build their foundational digital capabilities



## Aspirational Security Agency

For SMEs looking to grow their digital capabilities



## Tech-savvy Security Agency

For SMEs looking to reach an advanced stage of digital capabilities



Note: The names and SMEs mentioned in these personas are entirely fictitious and have no real-world counterparts.

### Personas' Challenges

<p><b>Traditional Security Agency</b> For SMEs looking to build their foundational digital capabilities</p> <ul style="list-style-type: none"> <li>✘ Manual visitor registration is a tedious process for my security officers</li> </ul>	<p><b>Aspirational Security Agency</b> For SMEs looking to grow their digital capabilities</p> <ul style="list-style-type: none"> <li>✘ Difficulty in scaling my operations which can often be manpower dependent</li> </ul>	<p><b>Tech-savvy Security Agency</b> For SMEs looking to reach an advanced stage of digital capabilities</p> <ul style="list-style-type: none"> <li>✘ My senior security officers are over deployed to supervise new security officers</li> </ul>
<ul style="list-style-type: none"> <li>✘ Efficient patrol planning and real-time incident reporting are challenging for my security officers</li> </ul>	<ul style="list-style-type: none"> <li>✘ Poor communication and coordination between my security officers and command center</li> </ul>	<ul style="list-style-type: none"> <li>✘ Augment my workforce capability so that we can take on more integrated facility management related services"</li> </ul>
<ul style="list-style-type: none"> <li>✘ Unable to monitor safety and well-being of my security officers deployed remotely to sites</li> </ul>	<ul style="list-style-type: none"> <li>✘ Manual monitoring of the security dashboard for potential threats around the clock can be exhausting for my officers</li> </ul>	<ul style="list-style-type: none"> <li>✘ Enhancing my service offering beyond security so that we can do integrated facility management</li> </ul>

# Digital Solution Roadmap

This digital solution roadmap outlines solutions for your company to adopt at each stage of growth. Where relevant, data analytics and artificial intelligence (AI) are enabled into the solutions.

Business Area	Stage 1 Getting ready for the digital economy <small>For SMEs looking to build their foundational digital capabilities<sup>1</sup></small>	Stage 2 Growing in the digital economy <small>For SMEs looking to grow their digital capabilities<sup>1</sup></small>	Stage 3 Leaping ahead in the digital economy <small>For SMEs looking to reach an advanced stage of digital capabilities<sup>1</sup></small>
Productivity Tools	<ul style="list-style-type: none"> <li>Mobile-Enabled Patrol &amp; Incident Management</li> <li>Wearable Security Technology</li> </ul>	<ul style="list-style-type: none"> <li>Extended Reality (XR) for Training</li> </ul>	<ul style="list-style-type: none"> <li>Extended Reality (XR) for On-Ground Remote Support</li> </ul>
Automation	<ul style="list-style-type: none"> <li>Onsite Surveillance &amp; Analytics</li> <li>Automated Visitor Management</li> </ul>	<ul style="list-style-type: none"> <li>Risk / Threat Prediction &amp; Detection</li> <li>Security Robots</li> </ul>	<ul style="list-style-type: none"> <li>Integrated Security Robots</li> </ul>
Integrated Platforms		<ul style="list-style-type: none"> <li>Security Collaboration Platform</li> </ul>	<ul style="list-style-type: none"> <li>Integrated Security Management</li> </ul>



SMEs can also adopt generic solutions such as cybersecurity, accounting management, and human resource management. Newly incorporated businesses can also adopt foundational solutions under Start Digital, covering areas such as cybersecurity, sales generation, and business efficiency.

<sup>1</sup>SME could progress from one stage to the next stage as their need and challenges change

## Stage 1: Getting ready for the digital economy

For SMEs looking to build their foundational digital capabilities



Productivity Tools

### Mobile-Enabled Patrol & Incident Management

Enables mobile work assignment and reporting with real-time tracking, reporting and communication.

Organises, tracks and manages patrol activities, resources, routes, and documentation.

Benefits

Improves security response and incident reporting turnaround



Productivity Tools

### Wearable Security Technology

Body-worn camera and/or smart watch enables security officer to augment patrolling duties, event capturing, geolocation tracking and man-down/SOS alert.

Monitors security officers' critical health and safety information.

Benefits

Improves security officers' safety and protection

Enables real-time monitoring of security incidents

Enables response capabilities and improves situational awareness



Automation

### Onsite Surveillance & Analytics

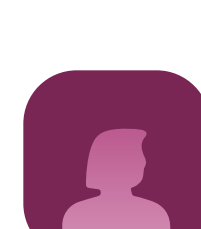
IP-enabled video cameras augmented with analytics to detect security incidents and enhance onsite security monitoring.

Benefits

Deters crime and identifies potential threats

Enables remote surveillances and improves situational awareness

Reduces the need of foot patrol



Automation

### Automated Visitor Management

Controls facility access with automated visitor registration.

Optional features include biometrics, car plate recognition and integration with facility access control systems can prevent unauthorised entry.

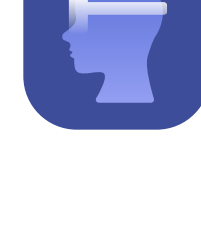
Benefits

Speeds up visitor registrations

Improves decision-making based on visitor patterns

## Stage 2: Growing in the digital economy

For SMEs looking to grow their digital capabilities



Productivity Tools

### Extended Reality (XR) for Training

Immersive technologies for security training, and decision-making simulation including wide range of realistic situational scenarios.

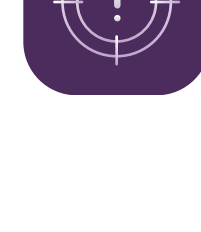
Offers security officers easy access to training resources, and effectively tracks trainees' performance.

Benefits

Improves training outcomes and knowledge retention

Provides high quality experiential learning without physical boundaries

Experiences different scenarios that can be difficult and costly to replicate in real life



Automation

### Risk/Threat Prediction & Detection

Advanced analytics for detecting unusual and less predictable security events (e.g. suspicious behavior, unattended object, violence) under challenging situations (e.g. large crowds) to proactively predict and anticipate potential threats.

Benefits

Provides holistic view of the threat landscape for better decision-making

Improves response times of potential threats



Automation

### Security Robots

Autonomous security robots augment patrol, surveillance duties, respond to incidents, defuse situations, and deter crime.

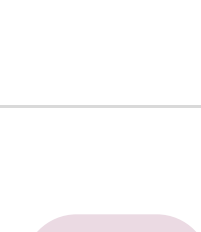
Covers hazardous situations that are challenging, unsafe or impossible to deploy cameras.

Benefits

Enables 24/7 security presences

Eliminates lapses in surveillance and security duties

Enhances protection for security officers and reduces need for foot patrol



Integrated Platforms

### Security Collaboration Platform

Collaborates with visitor, incident management, video management system, and other security systems to enable visualisation, sense-making, intelligent responses, and streamline security operations.

Benefits

Organises and automates security workflows from a unified perspective and enables informed decision-making

Improves collaboration with security stakeholders

Allows remote surveillance of multiple/ cluster of sites

## Stage 3: Leaping ahead in the digital economy

For SMEs looking to reach an advanced stage of digital capabilities



Productivity Tools

### Extended Reality (XR) for On-Ground Remote Support

Immersive technologies to provide security officers with on-ground remote support (e.g. hands-free remote expert, SOP, real time overlay of information, virtual assistance and avatar of security team) from the command center.

Benefits

Empowers on-ground security officers with remote instruction and guidance

Enhances collaborative responses with remote security teams



Automation

### Integrated Security Robots

Autonomous multi-purposes robots safeguard building premises and ensure comfort of tenants (e.g. conducting security patrol, routine cleanliness, maintenance and inspections of building facilities).

Benefits

Enables persistent security presence and building facility monitoring through 24/7 monitoring/ coverage

Monitors environmental parameters and ensures optimal conditions of the building facilities.



Integrated Platforms

### Integrated Security Management

Integrated Security Management (ISM) is a centralised platform, which provides;

1. A management dashboard for high-level insight of integrated facilities management; and
2. An operational dashboard for real-time monitoring, control and incidence responses.

ISM platform integrates with 3rd party digital platforms of the more common Facility Management services (such as security digital platform, fire safety equipment digital platform, toilet cleanliness digital platform, indoor air quality digital platform, energy consumption digital platform).

Benefits

Empowers Service Buyers with holistic view of building performances, and strategic insights to make informed decisions

Enables Security Agency to expand their services beyond security guarding to service buyers

Enables Security Officers to be upskilled with more value-added roles

Improves collaboration between Security Agency and other FM service providers as part of Integrated Facilities Management (IFM).

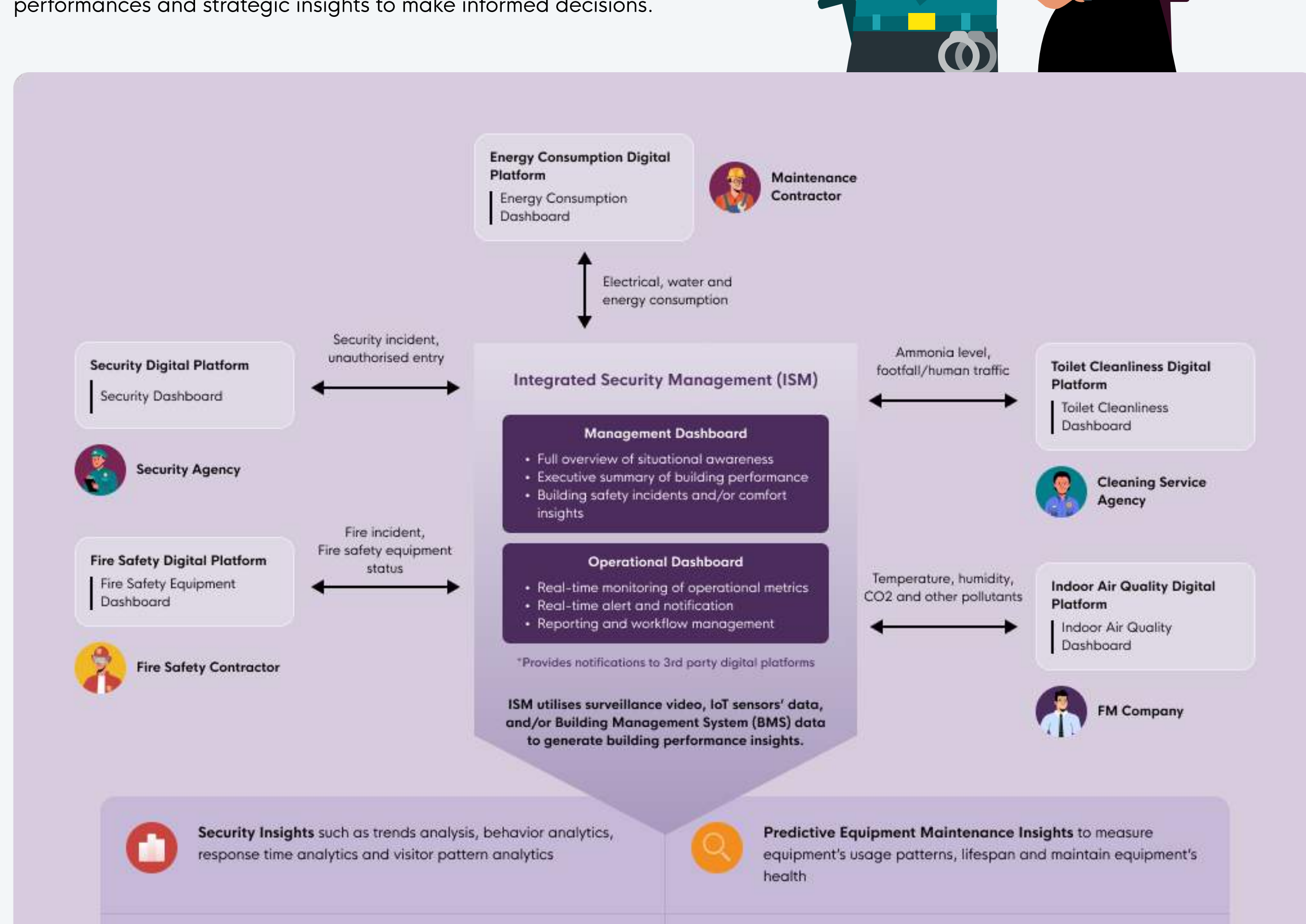
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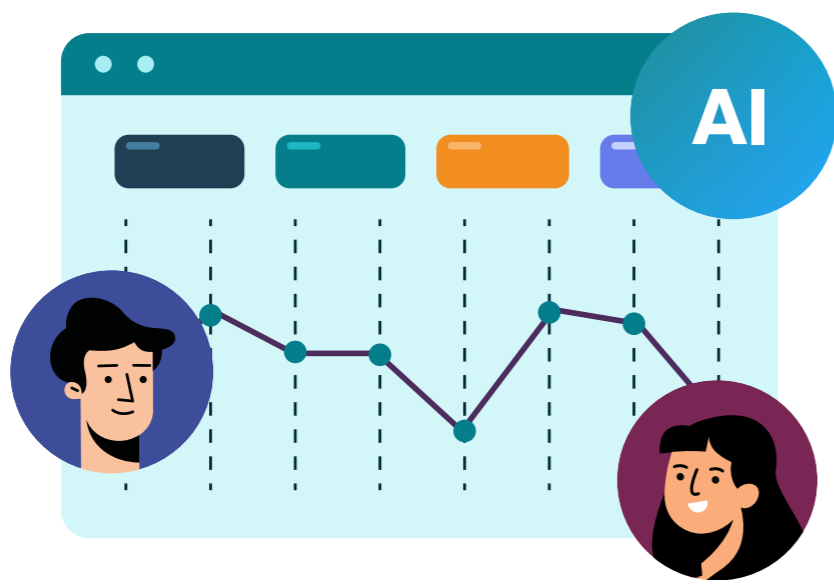
ISM can empower Security Service Buyers with holistic view of building performances and strategic insights to make informed decisions.



# AI For Security

AI-enabled solutions help security officers enhance onsite security surveillance, detect and predict potential threat / risk, and improve the visitors' registration process.

## Examples of AI Use Case

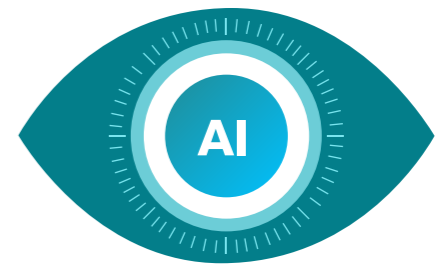


### Automated Visitor Management

Enhances security and visitors' experience with facial and vehicle recognition to prevent unauthorised access, speed up registration, and identify illegal parking.

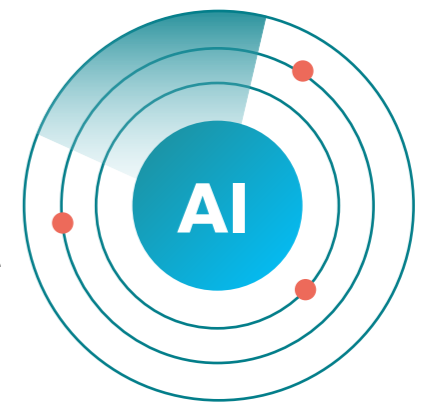
### Onsite Surveillance & Analytics

Improves real-time surveillance by detecting intrusion, loitering, people counting, queue monitoring, and human traffic flow. Profiles audience by demographics and face indexing to identify patterns, trends, and anomalies, reducing false alarms.



### Risk/ Threat Prediction & Detection

Detects security threats like suspicious behavior, possession of weapons, vandalism, and abnormal sounds. Assesses severity, predicts potential breaches, and optimises response time for proactive security measures.



## Generative AI

Generative AI (Gen-AI) enabled solutions help security officers streamline security industry workflow.

### Examples of Gen-AI Applications

1. Provide writing assistance of security incident reports by analysing and summarising security logs, allowing quicker understanding of security risks and threats.
2. Provide visitor profiling and tracking by analysing visitor data, create profiles based on frequency, duration and area of visits as well as visitor movement within facility to identify any usual behavior.
3. Provide answer of potential security incident or breach: by providing in-depth analyses of findings, attack routes, and proactive measures.

Help to re-write the incident report to keep it succinct.

When was the unattended parcel detected at the entrance?

Prompt

How many times did the person with Sxxx1234z ID visited the warehouse?










### In leveraging AI-enabled solutions, Security SMEs should consider the following:

1. Cost: SMEs need to consider the cost of implementing AI solutions and ensure the benefits outweigh the cost. Business could start with use cases that offer most value.
2. Data: SMEs will need access to high quality data necessary to power the AI solution. If the collected data contains personal identifiable information, due care needs to be exercised in the collection, processing and storage of these personal data to ensure that they are compliance with Personal Data Protection regulation.
3. Tamper-proofing: SMEs need to ensure that the AI solution is secure and tamper-proof to prevent bad actors from compromising the system.

# Cybersecurity and Data Protection Roadmap

This roadmap serves as a guide to introduce SMEs to cyber security and data protection measures at each of the three stages of growth. For more information, please refer to [CSA SG Cyber Safe programme](#), [Data Protection Essentials \(DPE\)](#) and [Data Protection Trustmark \(DPTM\)](#).

Areas	Stage 1 Getting Ready for the Digital Economy	Stage 2 Growing in the Digital Economy	Stage 3 Leaping Ahead in the Digital Economy
<b>Cybersecurity</b> As the company increases its level of digitalisation	Cyber hygiene measures for protection against common attacks   For Employees For SMEs     Cybersecurity Solutions	Risk assessment to assess if cybersecurity measures commensurate with enterprise risk profile     Cybersecurity Solutions	
<b>Data Protection</b> As the company increases its collection and use of personal data	Basic data protection and security practices to protect clients' personal data & recover quickly from a data breach  	Accountable data protection practices to demonstrate compliance with the PDPA  	

## Digital skills training roadmap

This digital skills training roadmap serves as a guide to equip your company and workers with the necessary skills (including change management) to adopt digital solutions at each stage of growth. Training programme are aligned to [Skills Framework](#) and emerging areas under [SkillsFuture Series](#).


Areas	Stage 1 Getting Digital Economy Ready	Stage 2 Growing in the Digital Economy	Stage 3 Leaping Ahead
<b>Tech Basics</b> All employees in industry  Require broad based digital literacy and awareness	<ul style="list-style-type: none"> <li>✓ Innovation Mindset</li> <li>✓ Security and Digital Literacy</li> <li>✓ Mobile Patrol and Incident Management</li> <li>✓ Access Control, Carpark and Visitor Management</li> <li>✓ Onsite Surveillance and Analytics</li> <li>✓ Wearable Security Tech</li> <li>✓ Workplace Safety and Health Guideline</li> </ul>	<ul style="list-style-type: none"> <li>✓ Unleashing Innovation</li> <li>✓ Security Robots / Drones</li> <li>✓ Analytics for Security Detection / Prediction</li> <li>✓ Security Collaboration Platform</li> <li>✓ PDPA e-Learning Programme</li> <li>✓ SkillsFuture for Digital Workplace</li> <li>✓ SkillsFuture Series (Data Analytics and Digital Media)</li> <li>✓ SkillsFuture Series (Cybersecurity and Entrepreneurship)</li> <li>✓ Change Management Basics</li> <li>✓ Sustainable Security Technology</li> </ul>	<ul style="list-style-type: none"> <li>✓ Innovation for Competitive Advantage</li> <li>✓ Integrated Security Robots</li> <li>✓ Integration Facility Management</li> <li>✓ Demonstrate Building Performance and Sustainability Improvement</li> <li>✓ Business Process and Workflow Automation – Design, Deploy and Manage</li> <li>✓ Basics to Smart Facilities Management (FM)</li> <li>✓ Coding for All</li> <li>✓ Generative AI Prompt Engineering</li> </ul>
<b>Vendor Solution Specific Training</b>			
<b>Tech Advanced</b> Employees that explore or use advanced tech in their work  Require higher proficiency digital skills	<ul style="list-style-type: none"> <li>✓ Building Foundation in Microsoft Excel</li> <li>✓ Basic Business Analytics @ Work</li> <li>✓ WSH@Robotics</li> <li>✓ Fundamental of Video Camera Analytics</li> <li>✓ Fundamentals of Personal Data Protection Act (PDPA)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Implementation of Change Management Programme &amp; Initiatives</li> <li>✓ Managing Change for Digital Transformations</li> <li>✓ Understanding Cyber Risk Assessment and Management</li> <li>✓ Advanced to Video Camera Analytics</li> <li>✓ Industrial IoT and Data Analytics</li> <li>✓ Internet of Everything (IoE)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Design Thinking: A Strategy for Idea Generating and Problem Solving</li> <li>✓ AR/VR at the Workplace</li> <li>✓ Data Security Governance</li> <li>✓ Robotics Integration and Adaptation</li> <li>✓ Digital Transformation for Strategic Competitiveness</li> </ul>
<p>* Training programmes aligned to Skills Framework and emerging areas under SkillsFuture Series</p> <p>** Training programmes aligned to Data Protection Officer Competency Framework and Training Roadmap and broad-based data literacy/awareness and cyber essentials.</p>			
			

For assistance in company-led upskilling of existing employees in tech capabilities, including job redesign and redeployment, contact [MDA's Jobs Transformation Map \(JTM\) Training Partners](#).

Note: Training programmes can be found at [MySkillsFuture Course Director](#)

## Get Started Today


CTO-as-a-Service is a one-stop self-help platform that allows your company to identify digitalisation needs, access market-proven solutions and engage digital consultants for customised advice.



**Take a 5-minute Digital Health Check to see if you are digitally-ready**

Answer a few simple questions to receive recommendations on the right digital solutions, grants and support based on your business profile.


[Start now](#)



**Looking for digital solutions with grants or support**

Browse over 400 digital solutions and software with grants or support eligible for small and medium enterprises (SMEs).

[Start now](#)



**Digital Consultancy**

Get complimentary Digital Consultancy and project management support to grow your business.

[Get Started](#)

**Get Inspired!**

Check out how some SMEs have successfully grown their business through digitalisation and keep up with the latest updates.

[Learn More](#)

### Additional Information

Other references and valuable insights for you to get to know the sector better.

For SME	<b>One-stop self-help platform</b> <a href="#">CTO-as-a-Service</a>  <b>Business Advisory and Digital Consultancy</b> <a href="#">SME Centres managed by trade associations</a> <ul style="list-style-type: none"> <li>• SME Centre@ASME</li> <li>• SME Centre@SCCCI</li> <li>• SME Centre@SICCI</li> <li>• SME Centre@SMCCI</li> <li>• SME Centre@SMF</li> </ul>	<b>Digital Skills Training</b> <a href="#">Skills Framework</a> <a href="#">SkillsFuture for Digital Workplace (SFDW) 2.0</a> <a href="#">SkillsFuture Series</a> <a href="#">MySkillsFuture course directory</a>  <b>Company-Led Upskilling</b> <a href="#">TechSkills Accelerator (TESA) &amp; JTM Training Partners</a>	<b>Cybersecurity and Data Protection</b> <a href="#">CSA SG Cyber Safe Programme</a> <a href="#">Cyber Essentials</a> <a href="#">Cybersecurity Toolkits</a> <a href="#">Cyber Trust</a> <a href="#">Better Data Driven Business</a> <a href="#">Data Protection Essentials</a> <a href="#">Data Protection Trustmark</a>
For ICM Vendors	<b>For ICM Vendors</b> <a href="#">Vendors Self-Assessment Checklist</a>		