Best Practices for Conducting Remote Assessments/Audits

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Outline

1. Introduction

2. Best Practices for Conducting Remote Assessments/Audits

    • International Community

    • Singapore

    • Singapore Accreditation Council – Learning Points

3. Preparations in supporting remote assessments/ audits

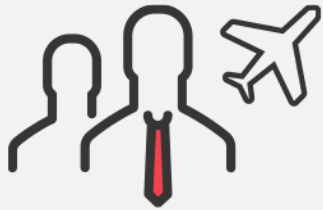4. Support Available to Help Companies Adopt Relevant Technology and Solution

Introduction

1.1 About Enterprise Singapore and Quality & Excellence Group
QEG - Building Trust in Singapore Products and Services

We grow stronger Singapore enterprises

MISSION

Grow stronger Singapore enterprises by building capabilities and accessing global opportunities, thereby creating good jobs for Singaporeans.

4 PILLARS OF ENTERPRISE SINGAPORE

Building resilient, competitive industries and enterprises

Tapping global opportunities for Singapore

Developing Singapore as a top global trading and startup hub

Building trust in Singapore products and services

1.2 About Enterprise Singapore and Quality & Excellence Group
Building on our Quality & Excellence infrastructure to enable industry transformation and internationalization

Enterprise Singapore

STANDARDS DEVELOPMENT

Singapore Standards Council

TESTING, INSPECTION & CERTIFICATION (TIC)

ACCREDITATION

Singapore Accreditation Council

CONSUMER PRODUCT SAFETY, WEIGHTS AND MEASURES

SAFETY MARK 123456-00

ACCURACY LABEL 00 Verified: Apr 2018

Develop and review Singapore standards to facilitate interoperability, conformance and market access

Competent, accredited TIC players provide supporting services

Accreditation programmes to ensure TIC quality

Ensures accurate weights and measures transactions, and safety of household consumer goods sold

Assess conformance of enterprises to standards

Ensure competence and impartiality of TICs

for industry & enterprises, as well as public health and safety

Quality Products & Services

Excellent Organisations

Market Penetration

Health, Safety & Environment

1.3 About TIC Interest Group

Enterprise Singapore

Mission

To serve and advance the interests of the TIC Industry in Singapore
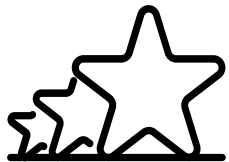
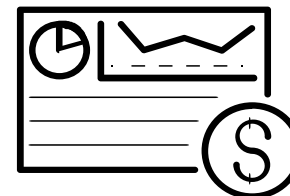## Roles of TIC Interest Group

Champion the interests of the members via regular engagements with industry and policymakers

Develop and provide recommendations to industry/policymakers TIC services that can support national or industry initiative
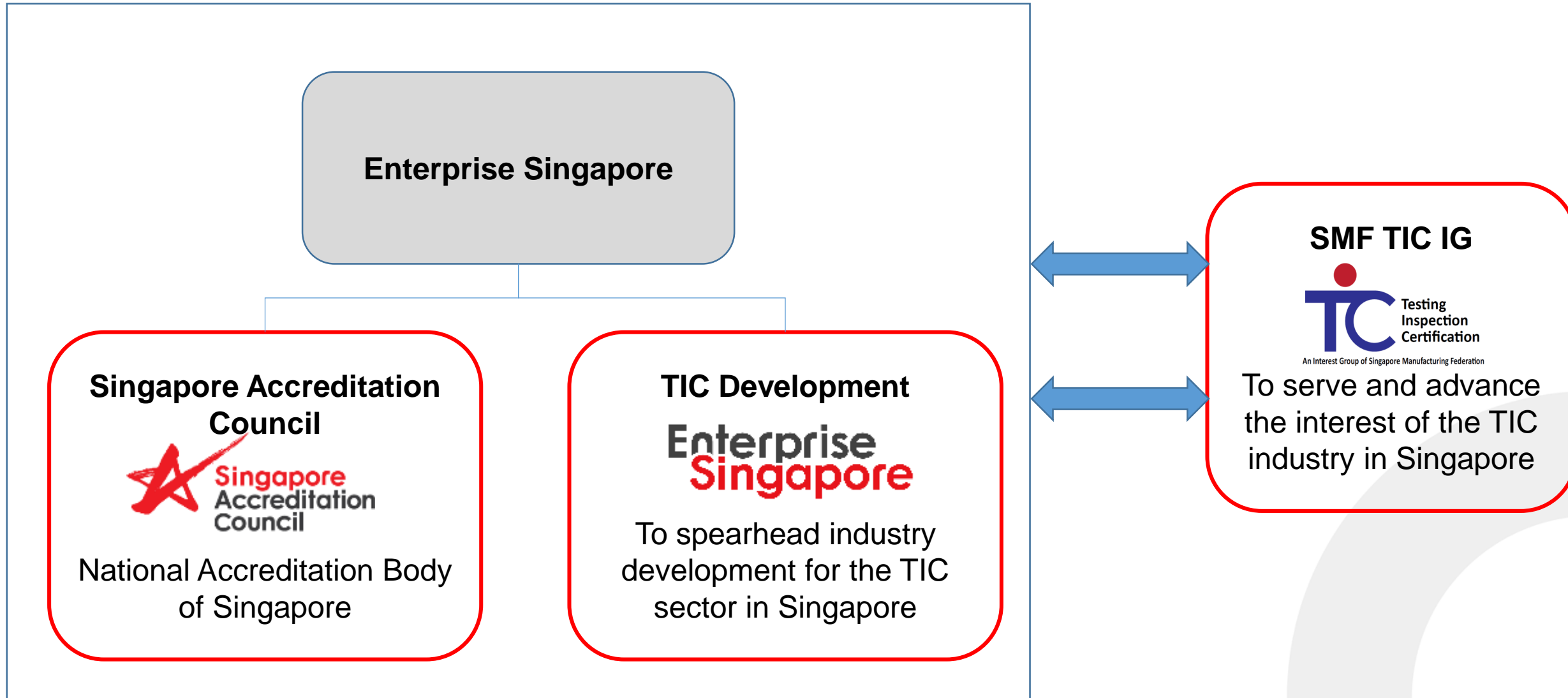
Raise the profile and public awareness of TIC sector

Upgrade the capabilities of TIC sector

6

1.4 Building a Robust TIC Industry

Enterprise Singapore

Singapore Accreditation Council

National Accreditation Body of Singapore

TIC Development

To spearhead industry development for the TIC sector in Singapore

SMF TIC IG

To serve and advance the interest of the TIC industry in Singapore

Best Practices for Conducting Remote Assessments/Audits

2.1 Overview
Motivations for adopting remote assessments

Pandemic

Travel Restrictions

Technology Advancement

2.2 Remote Assessment Best Practices – International
Existing areas of remote conformity assessments

Enterprise Singapore

Credit: Bureau Veritas
Source: Safetyatsea.net

Remote Inspections of Vessels

- Drone based remote inspections

- Thickness measurements

- in cargo hold spaces using ultrasonic techniques

Credit: Lamprell
Source: offshore-energy.biz

Remote Survey and Certification

- Remote survey of steel for rigs to be built

- Certified steel at steel mill with data provided to facilitate on-time fabrication of the rigs

Credit: RINA
Source: offshore-energy.biz

Classification Surveys – Live Streaming

- Live-streaming survey of ship's hull and machinery

- Detailed inspections which can't be achieved with the human eye - onshore

Credit: Boston Dynamics
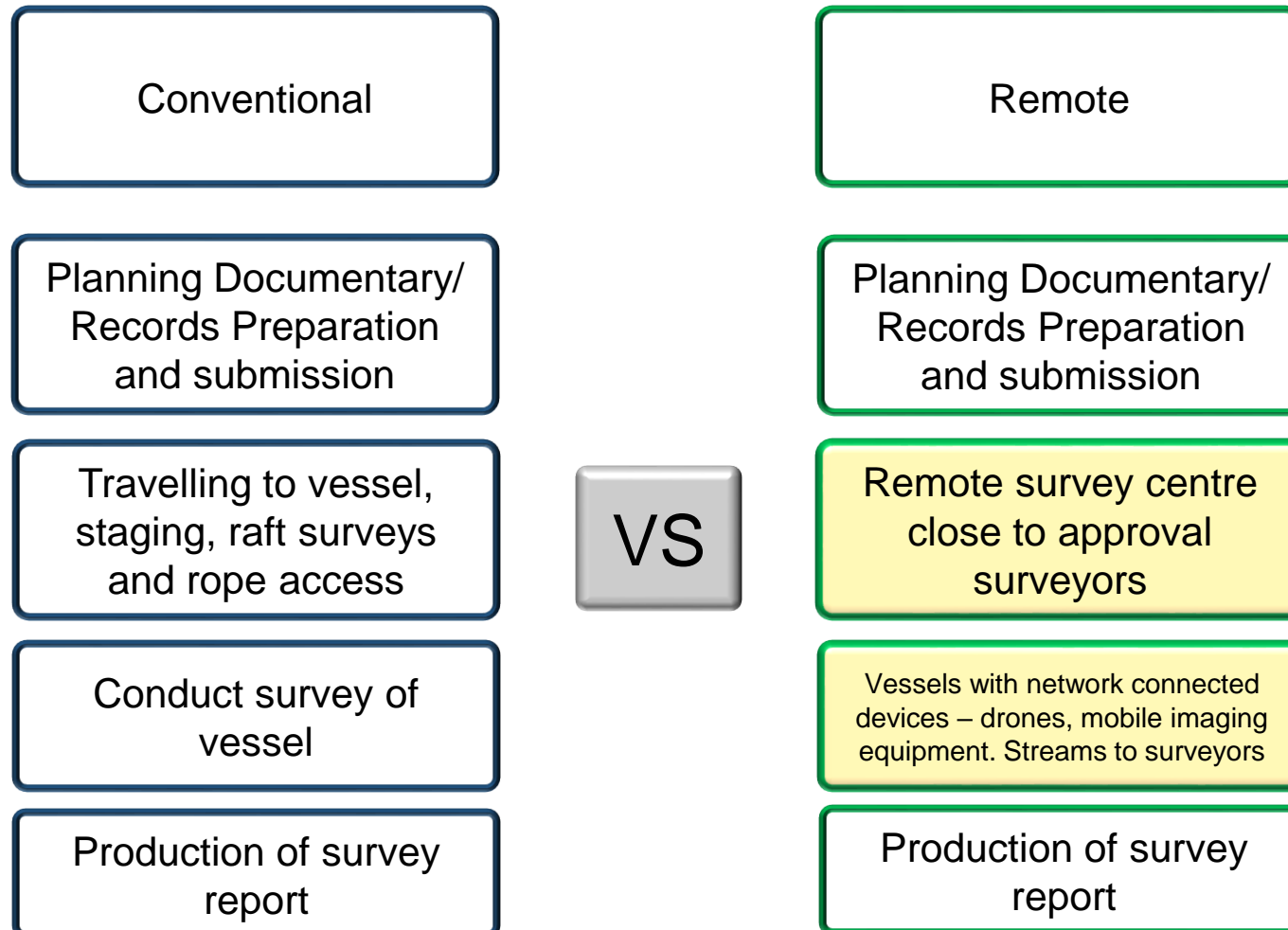Source: technologyreview.com

Spot – Rig Patrol

- Inspection of gas leaks and data collection on offshore rigs

- Perform work in high-risks environments

2.2 Remote Assessment Best Practices – International
Existing areas of remote conformity assessments

Enterprise Singapore

Remote Inspections of Vessels – How?

Credit: Bureau Veritas
Source: marine-offshore.bureauveritas.com

Conventional		Remote
Planning Documentary/ Records Preparation and submission		Planning Documentary/ Records Preparation and submission
Travelling to vessel, staging, raft surveys and rope access	**VS**	Remote survey centre close to approval surveyors
Conduct survey of vessel		Vessels with network connected devices – drones, mobile imaging equipment. Streams to surveyors
Production of survey report		Production of survey report

Potential Benefits:
- Reduces time and costs – travelling, waiting, costs to ship managers

- Enhances productivity and business efficiencies

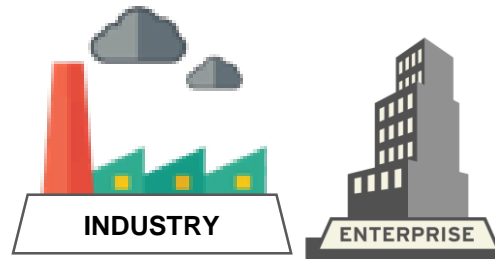- Reduces risks to health, safety and environment

2.3 Remote Assessment Best Practices – International
Opportunities for remote conformance activities

Enterprise Singapore

Regulators

- **Progressively accepting alternative means of ascertaining/demonstrating conformance**

- **Provisional, accommodative policies to balance businesses' needs and regulatory requirements**

End-users

- **Mindset change, openness for pilot trials, proof of concept to enable work-around solutions to ascertain conformity**

- **Prolonged pandemic situation drove the need to explore alternative means of enabling product/ service to market**

Accreditation Community

- **Supporting remote assessment processes**
  - ✓ ID3:2011 – IAF Informative Document for Management of Extraordinary Events
  - ✓ ID12: 2015 – Principles on remote assessment
  - ✓ IAF MD 4 – Mandatory Document for the user of information and communication technology (ICT) for Auditing/ Assessment Purposes

- **Recognize the need to move forward with alternate solutions to mitigate the impact brought about by Covid-19 to accreditation frameworks and operational processes**

2.4 Remote Assessment Best Practices – Singapore
Leverage technology to meet conformance and compliance needs efficiently

Enterprise Singapore

Credit: H3 Dynamics
Source: CNA and others

Industrial Building Facade Inspection

- Drone-based inspection of building facade

- AI-backed recognition system to identify flaws in inspected areas

Credit: Airobotics
Source: insideunmannedsystems.com

Police Enforcement

- Co-development between The Home Team Science & Technology Agency (HTX) and Airobotics

- Initial project - enhancement of first responder capabilities. Tweaked to support pandemic ops.

- Unmanned, self-monitoring and real-time tracking of anomalies

Credits: CNA
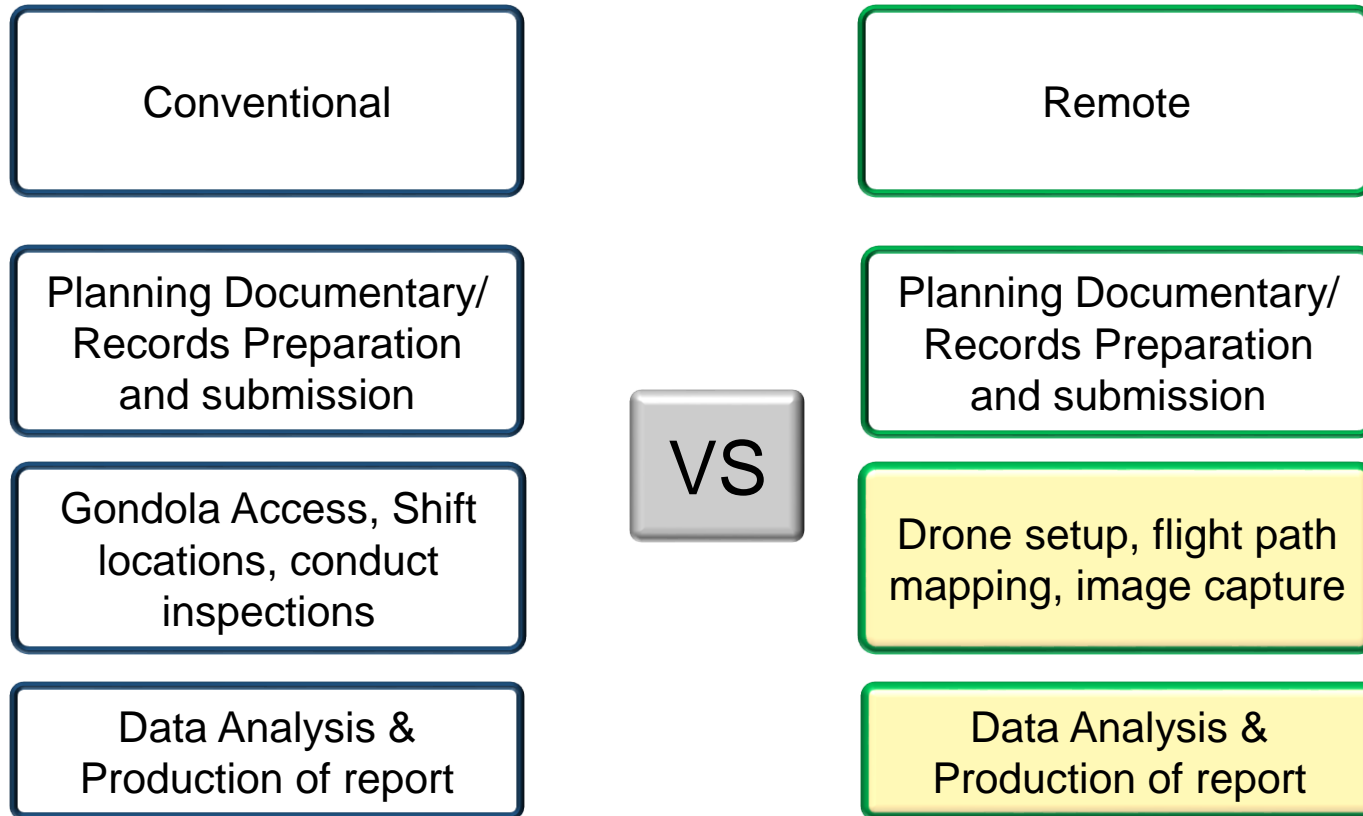Source: ecowatch.com

Spot – Safe Distancing

- Deployment of Boston Dynamics' spot – remind parkgoers to maintain safe distance.

- Remotely controlled by Nparks

2.4 Remote Assessment Best Practices – Singapore
Leverage technology to meet conformance and compliance needs

Enterprise Singapore

Remote Façade Inspection – How?

Conventional

Planning Documentary/ Records Preparation and submission

Gondola Access, Shift locations, conduct inspections

Data Analysis & Production of report

VS

Remote

Planning Documentary/ Records Preparation and submission

Drone setup, flight path mapping, image capture

Data Analysis & Production of report

Credit: H3 Dynamics
Source: CNA and others

Potential Benefits:
- Significantly reduces time and costs – equipment setup and adjustments
- Enhances data accuracy through AI with layer of human verification
- Reduces risks to health, safety and environment

2.5 Remote Assessment Best Practices – SAC
Learning Points

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Time Management

- Detailed assessment plans to smoothen process

- Pre-assessment documents, records reviews

- Familiarization of tools to enable process

- Trials and Infrastructure management

Communications

- Communicating clearly and specifically

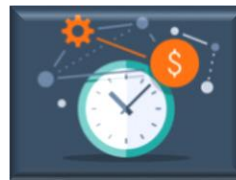- Misinterpretation causes delays – providing correct information or documents

Modalities

- Part remote document review, follow up with on-site witnessing

- Not applicable for complex scopes or initials

2.6 Remote Assessment Best Practices – Summary

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Acceptance and Recognition

Time & Costs Savings

Health, Safety and Environment

Preparations in supporting remote assessments/ audits

3.1 Preparations in supporting remote assessments/ audits

Administrative/ Logistical

- Coordination and presence of resources – quality representatives/ management and signatories

- Infrastructure setup and pre-assessment trials – Internet, Mobile hi-resolution imaging devices, mounting and stabilisation equipment

Documentation/ Records

- Confirmation of scope/ schedule at least 2 to 3 weeks before assessment day

- Advance preparations of records/ documents - last 12 months – would be requested at least 2 weeks in advance – cloud, drop-box or email

- Convert documents from MS words to PDF – files and size optimisation, word searchable. Compress (zip, rar, 7zip) and send in parts

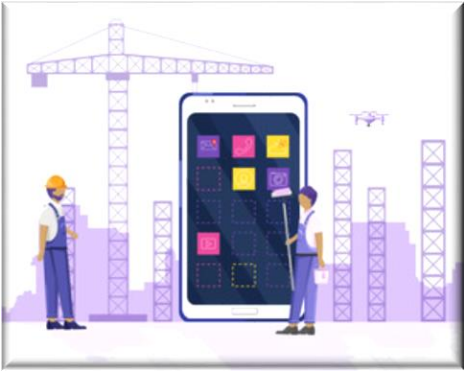# 3.1 Preparations in supporting remote assessments/ audits

Other considerations

✓ Additional resources to man live streaming of tests demonstrations

✓ Sensitive, confidential documents provided for review/ sighting
  • Determine level of access restrictions and/ or infrastructure security
  • Non-disclosure agreements/ Pre-assessment declarations

✓ Familiarisation with video conferencing platforms to reduce disruptions/ delays

3.2 Emerging Areas

Smart Inspections

Biomedical and Healthcare

Environmental Sustainability

Food and Agriculture

Digitalisation and Cybersecurity

3.3 Key Take-Aways

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Remote Assessment Readiness Checklist

✓ Determine scope suitability for remote assessment
- Review complexity and feasibility
- Discuss with your SAC account manager

✓ Plan and Prepare ahead
- Coordinate resource availability and update scopes
- Allocate sufficient time for demonstration witnessing
- Digitalise and optimise quality documents and records
- Determine security and confidentiality policies on documentary/ records sharing

✓ Resource checks
- High speed internet connection
- Mobile high resolution imaging devices
- Computing devices
- Familiarisation on setup and usage of systems and devices

✓ Others
- Communicate, update internal team on assessment/ audit plan
- Familiarisation with roles and responsibilities for assessment/ audit day/s and conduct trials

Notes:
- Assessment and/or audit modalities shall achieve the same objective as an on-site
- Checklist serves as a guide

Potential Areas:

Smart Inspections

Biomedical and Healthcare
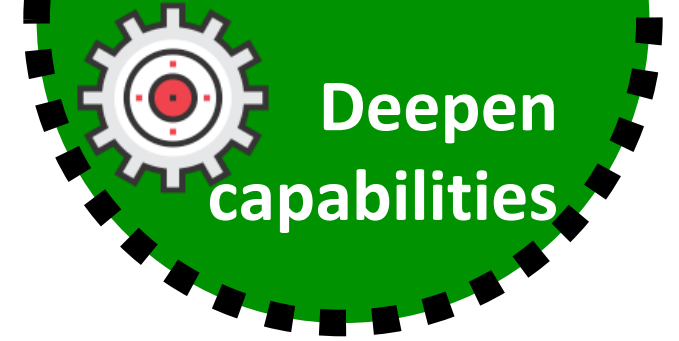
Environmental Sustainability

Food & Agriculture

Digitalisation & Cybersecurity

Support Available

4.1 Funding Support – STEER

Deepen capabilities

1 **Enhanced SG Together Enhancing Enterprise Resilience (STEER)**

- **ESG will match $1 for every $2 raised by industry-led funds, up to $1m per fund**

- **Supportable areas:**

Manage cashflow   **Grow businesses**   **Upgrade capabilities**

- **Interested TACs and industry groups can submit proposals to ESG from now until 2 March 2021**

For more info, please visit ESG website

From 1 April 2020 – 2 March 2021
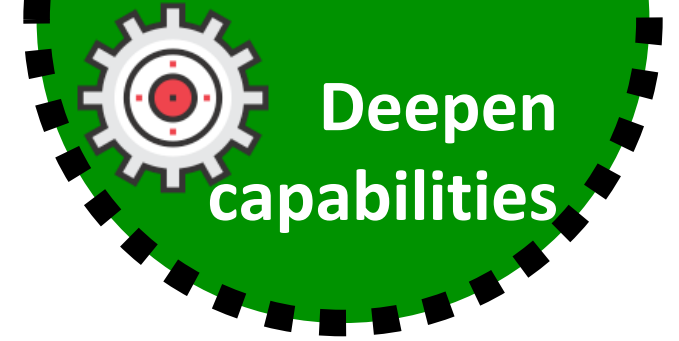
4.1 Funding Support – STEER

Examples of leveraging STEER to upgrade capabilities

Adoption of Drones

- Upgrade capabilities through adoption of drones to perform TIC activities

- Train relevant staff/personnel to operate drones

4.2 Funding Support – PSG

Deepen capabilities

② Enhanced Productivity Solutions Grant (PSG)
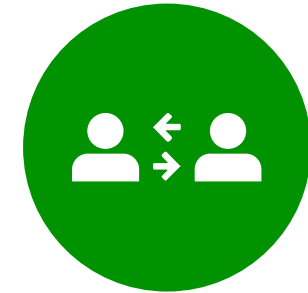
- **Pre-scoped IT Solution and readily available solutions**

- **Up to 80%** support of pre-approved productivity solutions and equipment

Online Collaboration & Virtual meeting tools

Cyber-Security Solutions

Business/Process Management Software

From 1 April 2020 – 31 December 2020

For more info, please visit **https://govassist.gobusiness.gov.sg/productivity-solutions-grant/ITSolution/others/**

4.2 Funding Support – PSG

Examples of Supportable Projects

Online Collaboration & Virtual Meeting Tools

Hardware: eg laptops
Software: eg Video Conferencing Tools, Cloud Services and Microsoft Office etc
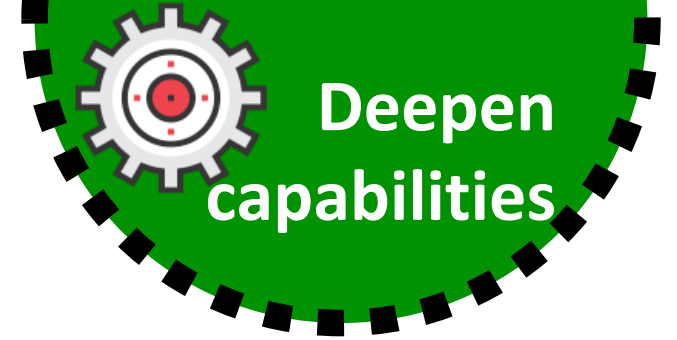
Cyber-Security Solutions

- Anti Virus Software
- Cyber-Security Software

Business/Process Management Software

- CRM System
- Inventory Management System
- Human Resource Management System

For more info, please visit https://govassist.gobusiness.gov.sg/productivity-solutions-grant/ITSolution/others/

26

4.3 Funding Support – EDG

Deepen capabilities

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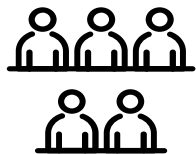# Enhanced Enterprise Development Grant (EDG)

- **Supports projects that help businesses to build capabilities, improve productivity, adopt technology/digital solutions or venture overseas**

- **Up to 80% support for all eligible projects**

For more info, please visit ESG website

From 1 April 2020 – 31 December 2020

Moving Forward

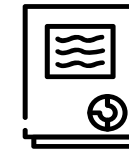# 5.1 Areas of Collaboration Between ESG & TIC IG

Enterprise Singapore

Champion the interests of the members via engagements with industry & policymakers:

- **Centralized platform for ESG and other stakeholders to engage TIC players on TIC development initiatives**

- **Representation in various SAC and Standards Development committees**

- **Working through TIC IG to address issues/concerns from TIC companies/industry**

Raise the profile and public awareness of TIC sector:

- **Joint efforts with ESG to develop Singapore as the TIC Hub to address local and regional TIC demand**

- **Organize overseas mission trips**

Upgrade the capabilities of TIC sector:

- **Foster collaborations amongst TIC players to leverage support programmes such as STEER to build TIC capabilities**

- **Co-organize relevant training sessions/webinars**

5.2 Upcoming Webinars/Activities

Topics	Tentative Date
Facilitating Market Access – TIC opportunities in Myanmar	End Oct 2020
[TBC] Regulators' Sharing – Outsourced TIC opportunities for TIC players	Nov/Dec 2020

Thank you!

ESG

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