



STANDARDS AND CONFORMANCE IN SMEs



PRESENTATION OUTLINE

1. Introduction to NISIT
2. Roles and Benefit of Standards and Conformance for SMEs-VSS
3. Challenges in for SMEs-VSS
4. Standards Support Value Chains in SMEs-VSS
5. Recommendations
6. Summary



National Institute of Standards & Industrial Technology
Facilitating Trade Through Standards & Conformity Assessment

Our Services

Develop & Publish Standards	Calibration	Certification & Audit	Accreditation
<ul style="list-style-type: none">• Products• Services• Processes• Sales & Information	<ul style="list-style-type: none">• Balances• Masses• Volume• Temperature• Pressure• Torque• Force• Density• Electrical <p>Verification</p> <ul style="list-style-type: none">• Length• Volume• Other Weighing Devices	<ul style="list-style-type: none">• Quality Management System (based on ISO 9001)• Food Safety Management System (based on ISO 22000)• HACCP Systems• Environmental Management Systems (based on ISO 14001)• Management Systems Training  	<ul style="list-style-type: none">• Testing & Calibration Laboratories (based on ISO/IEC 17025) <p>Fields of testing:</p> <ul style="list-style-type: none">• Biological Testing• Chemical Testing• Medical Testing• Construction Material Testing• Acoustic & Vibration Measurement• Heat & Temperature Measurement• Mechanical Testing• Metrology• Non-destructive Testing• Optical & Radiometry• Electrical Testing 

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Introduction to NISIT

- 1. Government Policy – Beyond the Mineral Boom, Established in 1993 ,NISIT Act.**
- 2. Standards Development Division**
- 3. Certification Division**
- 4. Metrology Division**
- 5. Accreditation Division**
- 6. Radiation Safety Division (NEW!)**



STANDARDS DEVELOPMENT DIVISION

ROLE:

- Develop or adopt national standards for PNG;
- Review standards for PNG;
- Standards are in areas of product, system, test methods, certification standards, accreditation standards, measurement standards, inspection standards, verification and validation standards.
- Alignment of standards to international standard.
- Have international standard ,national standards in Government Regulations;
- Address issues in WTO, Technical Bearers to Trade rules.

BENEFITS

- Cut down on time/money to look for specifications, writing up what to do and how to do or run your business;
- Use a harmonised arrangement, based on same standard makes communication, trade easier.
- Helps monitoring and evaluation easier with only one set of standard to follow.
- Reduces technical barriers to trade.
- Helps industries and government agencies cost less to put up Government Regulations.
- Answers 4W,1H questions.



CERTIFICATION DIVISION

ROLE:

- ❑ Provide Certification Standards advice, suitable for PNG, to Technical Standards division and clients.
- ❑ Provide external third party audit based on standards for management system, product...etc.
- ❑ Provide Third Party Certification to Management Systems based on International Standard; Like HACCP, ISO 22000 FSMS, ISO 90001 QMS.
- ❑ Provide advice to Government on Certification matters, like in WTO.

BENEFITS

- ❑ Audit reports provide room for continual quality improvement;
- ❑ Certification is key to trade negotiation purposes, for well balanced/harmonised, one stop standard certification;
- ❑ Provides standard agenda for management review, verification, internal audit and validation.
- ❑ Reduces wastage in the business.
- ❑ A competitive edge over rivals.



METROLOGY DIVISION-NATIONAL MEASUREMENT SYSTEM

ROLE

- ❑ **Provide advice to Technical Standards Division and Government on suitable National Measurement Standard for PNG;**
- ❑ **Maintain PNGs National Measurement standard traceable to international standards;**
- ❑ **Run a calibration laboratory to provide service to our industries for calibration and measurement verification.**
- ❑ **Basically, it is made up of Legal, Scientific and Industrial Metrology functions.**

BENEFIT

- ❑ **Measurement system standard is the same in the country.**
- ❑ **Ensure measurement is traceable and accepted in the region, internationally in trade and for general well being of the planet and its people;**
- ❑ **Increase level of measurement accuracy, less dispute in business transaction based on measurement.**
- ❑ **One stop accepted calibration certificate in trade.**

ACCREDITATION DIVISION

ROLE:

- ❑ Accreditation for Conformity Assessment Bodies. Like ISO/IEC 17025 for Testing Lab.
- ❑ Advice Standards Development Division on suitable accreditation system standard for PNG;
- ❑ Develop PNG Accreditation Services Schemes according to demand;
- ❑ Ensure Mutual Recognition is achieved at regional and international level for PNG Accreditation Services.
- ❑ Provide accreditation certificate to testing and calibration laboratories, inspection bodies, certification system, validation and verification bodies.

BENEFITS

- ❑ Conformity Assessment Bodies are accredited to provide certification, inspection and testing to SMEs;
- ❑ Ensure PNG SME standard for accreditation is harmonised with outside countries;
- ❑ No need to go overseas for accreditation.
- ❑ Benefit of being recognised at regional and international level. Easier for trade.
- ❑ One stop accreditation, example test report is accepted within region and at international level.



RADIATION SAFETY & CONTROL DIVISION

ROLE

**Regulator of Radiation Sources, Storage,
transportation, application**

**Contact point for the International
Atomic Energy Agency (IAEA)**

**Source of Issuance of Licences within the
Jurisdiction of PNG**

BENEFITS

**Ensure PNG complies to the International
Convention**

**Ensure PNG can be able to bring in
radiation sources**

**Users of Radiation sources operating
safely**

**Prevention of the abuse of radiation
source**

SO WHY PNG MSME NOT EXPORTING SIMPLE PRODUCTS- VSS VALUE CHAIN CHALLENGE



**DRY COCONUTS
FROM TONGA
SOLD AT
WOOLWORTHS
SUPERMARKET,
SYDNEY CBD,
AUSTRALIA**



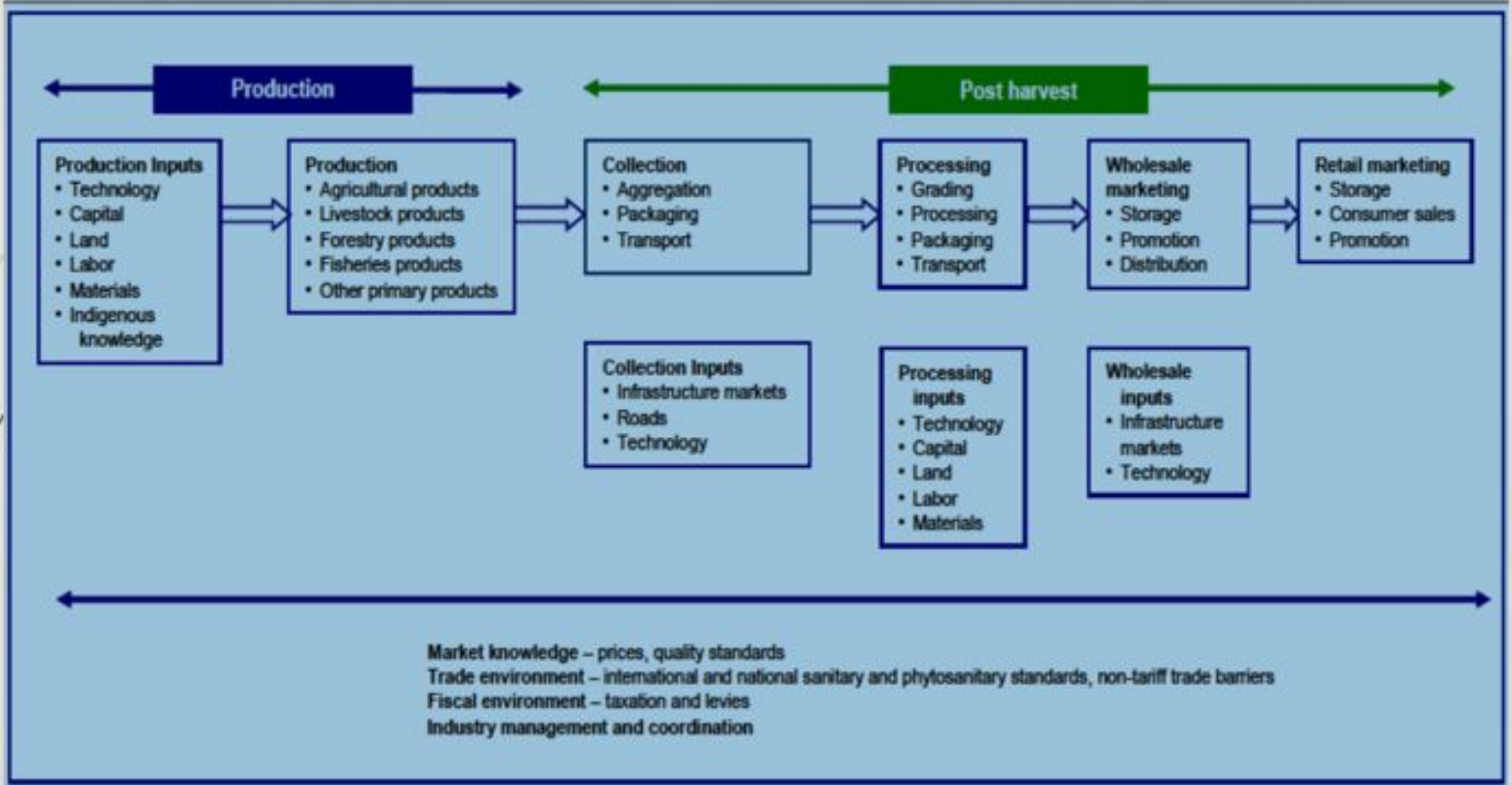
CHALLENGES IN PNG- VSS COMPLIANCE

- ❑ **Products and Services not meeting quality standards**
- ❑ **Expensive for SMEs to meet quality standards**
- ❑ **Lack of Knowledge of meeting quality standards**
- ❑ **Not interested in being in third party certification until its too late**
- ❑ **Reactive in Standards and Conformance than being proactive.**

OVERCOME CHALLENGES USING STANDARDS & CONFORMITY ASSESSMENT SCHEMES- VSS VALUE CHAIN

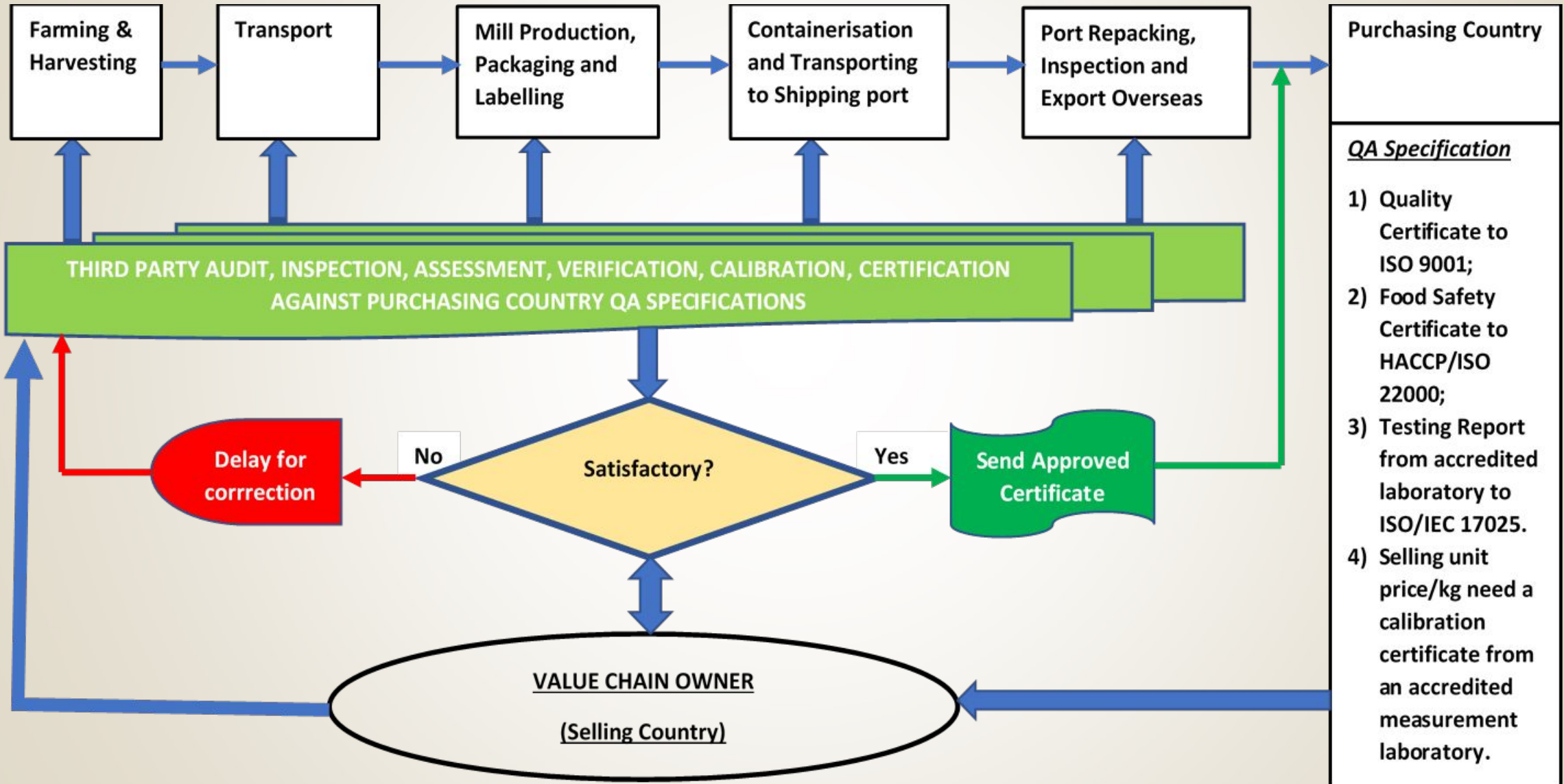
- Step 1: Know your Value Chain;**
- Step 2: Which part/section do you come in on the value chain as VCA and make relevant VSS input ;**
- Step 3: Work on your standards requirement relevant to your part as a integrated VSS process;**
- Step 4; Check your material resources, manpower resources, methods; machine/equipment; measurements; management system and money limitations to meet quality standard/s in the Value Chain. Do a SWOT.**
- Step 5: If all under control, start your business/activity. If not, explore other options;**
- Step 6: Review periodically for continual improvement using third party conformity assessment schemes and measurements.**

GENERIC AGRICULTURE VALUE CHAIN





AGRIBUSINESS VALUE CHAIN QA PROGRAM- VSS



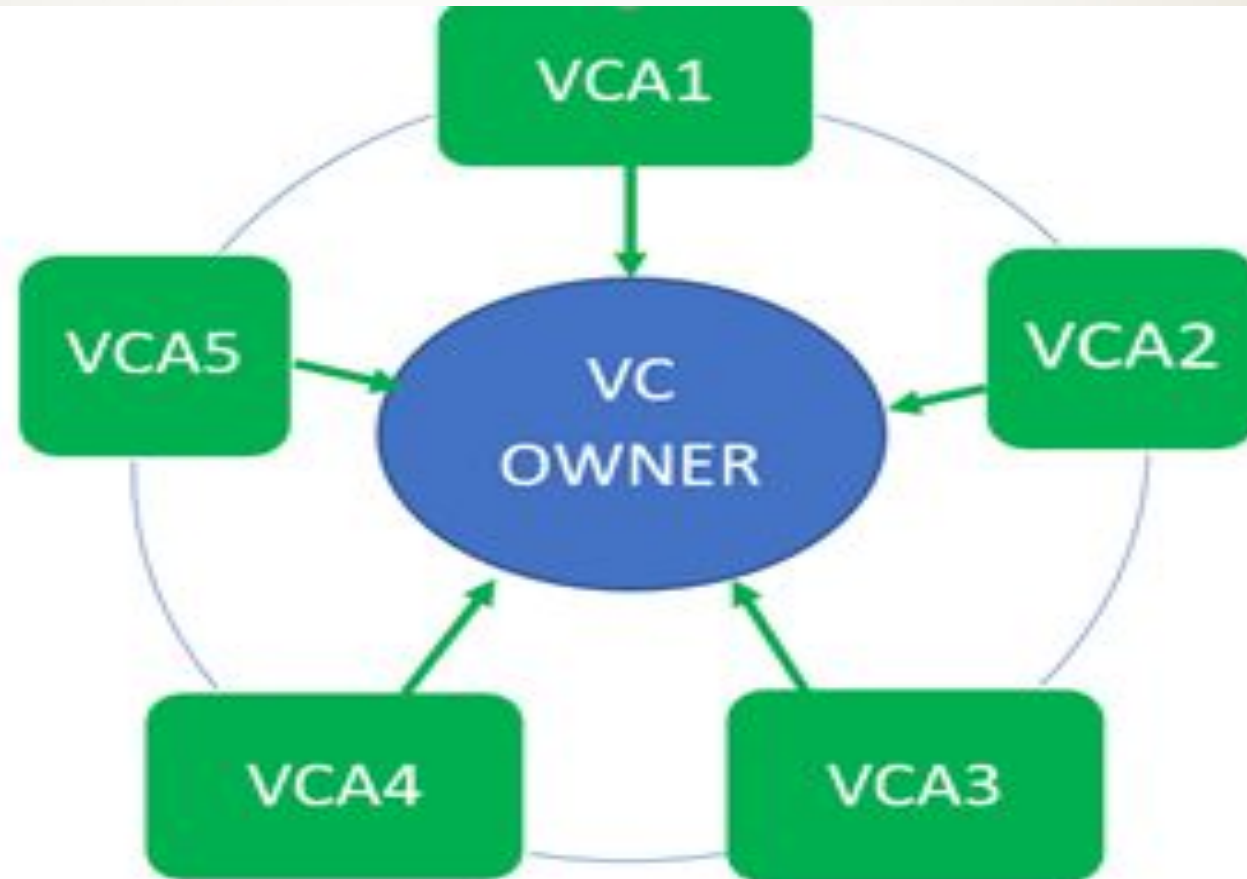
ANALOGY OF LARGE COMPANIES SUPPORTING MSMEs in QUALITY STANDARDS- OVERCOMING CHALLENGES



□ “I recently watched an osprey flying along the far edge of a pond and noticed that the osprey had picked up a follower, the red-winged blackbird. A small bird catching a free ride on a larger bird’s stick.”

Photographer [Jocelyn Anderson](#)

**VALUE CHAIN ACTORS FORM INDUSTRIAL / NATIONAL STANDARD -
BETTER CONTROL OVER VC OWNER**



VSS-POWER OF WORKING TOGETHER USING ONE



THIS extraordinary image, taken as dusk approaches, looks like a soaring bird from a fantasy film. In reality, it is a murmuration – a huge swarm of starlings moving and pulsating as a single spectacular mass in the sky.

Starlings are thought to form murmurations to protect themselves from predators, such as peregrine falcons, since it is much harder to single out an individual among such large numbers.

The birds can coordinate themselves because they respond so quickly to their neighbours. No single starling leads the swarm. Instead, each individual reacts as its neighbour changes direction or speed. We now know that starlings do this in groups of around seven: the movements of each small unit rapidly scale up to the entire murmuration, resulting in the shape-shifting masses.
Photographer James Crombie



NUMBER OF COMPANIES SERVICED BY NISIT.

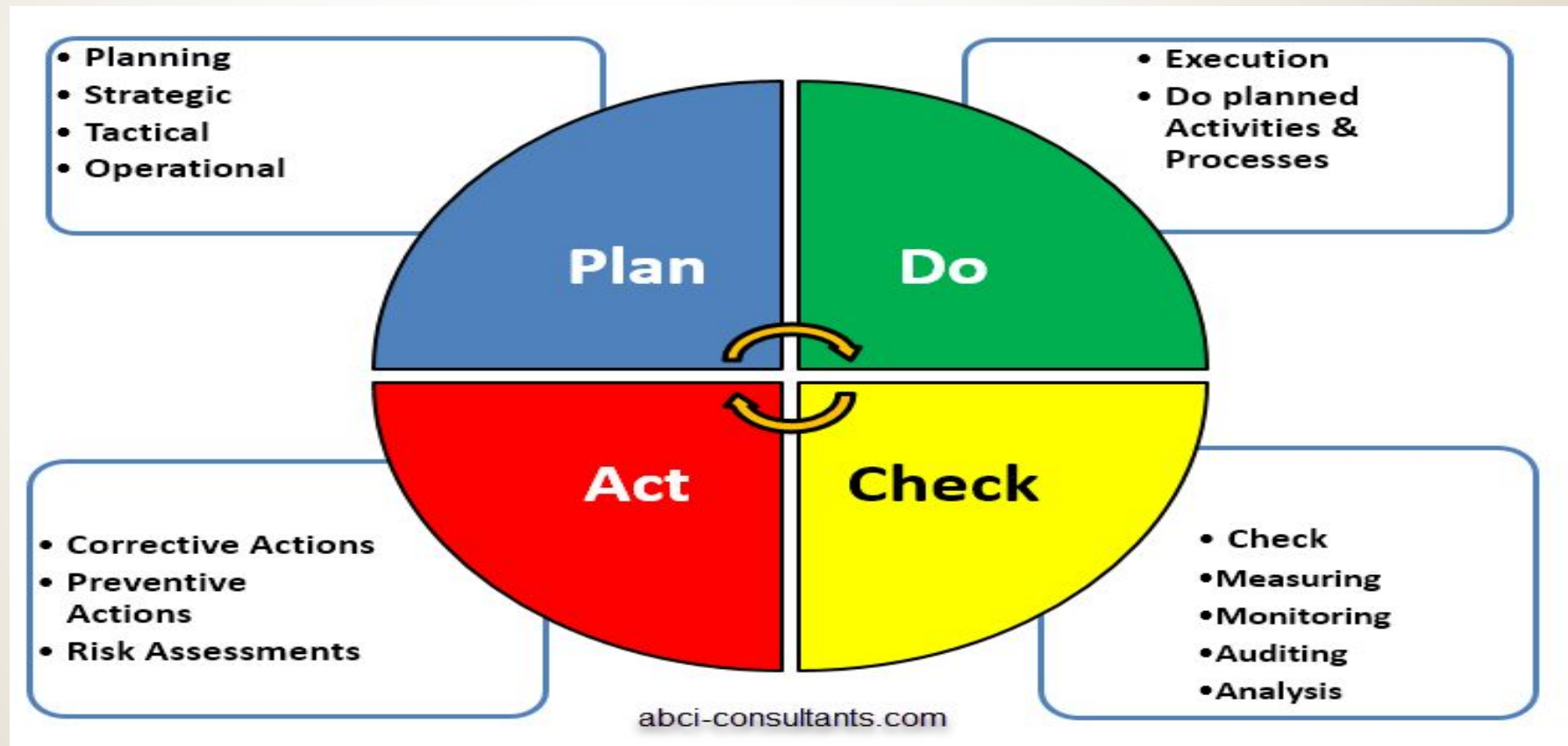
- ISO/IEC 17025 Accredited Laboratories : 27**
- HACCP/ISO 22000 Food Safety Certified: 10 food processing companies**
- Measurement Instrument Calibration: More than 30 clients in Mass, Balance, Volume, Temperature, Pressure, Torque, Force, Density, Length, etc:**
- Standards developed for PNG as PNGS: 900**
- (3 new ones in Fish & Fisheries Product PNGS 1710 (Safety and Trade Requirements), Green Bean Coffee PNGS 1626 and Seed Potato PNGS 1711)**

RECOMMENDATIONS

- Establish a **Subsidy Program for Vanilla SME's** to access the following services:
 - Product Certification (Marking Scheme)
 - System Certification (ISO 9001, ISO 14001, ISO 17025, ISO 50001, etc.)
 - Capability Assessment
 - Product Testing
 - Clear Sign-Posting or Referrals
 - Missing Link Programme (e.g. welding, clothing, timber, and others)
 - Interpretation of Specifications and Standards; and
 - Consignment of Inspectors.
- This program can be supported by some form of qualification criteria.
- Government to support big companies that assist MSMEs in their value chain.
- MSMEs to form associations like cooperatives to have a collective approach.

VSS SUMMARY- How it Works

- **START - PLAN MSME WITH STANDARDS, IMPLEMENT WITH STANDARD, MONITOR AND CONTINUALLY IMPROVE WITH STANDARDS.**



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FOR FURTHER
INFORMATION & ADVICE -
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