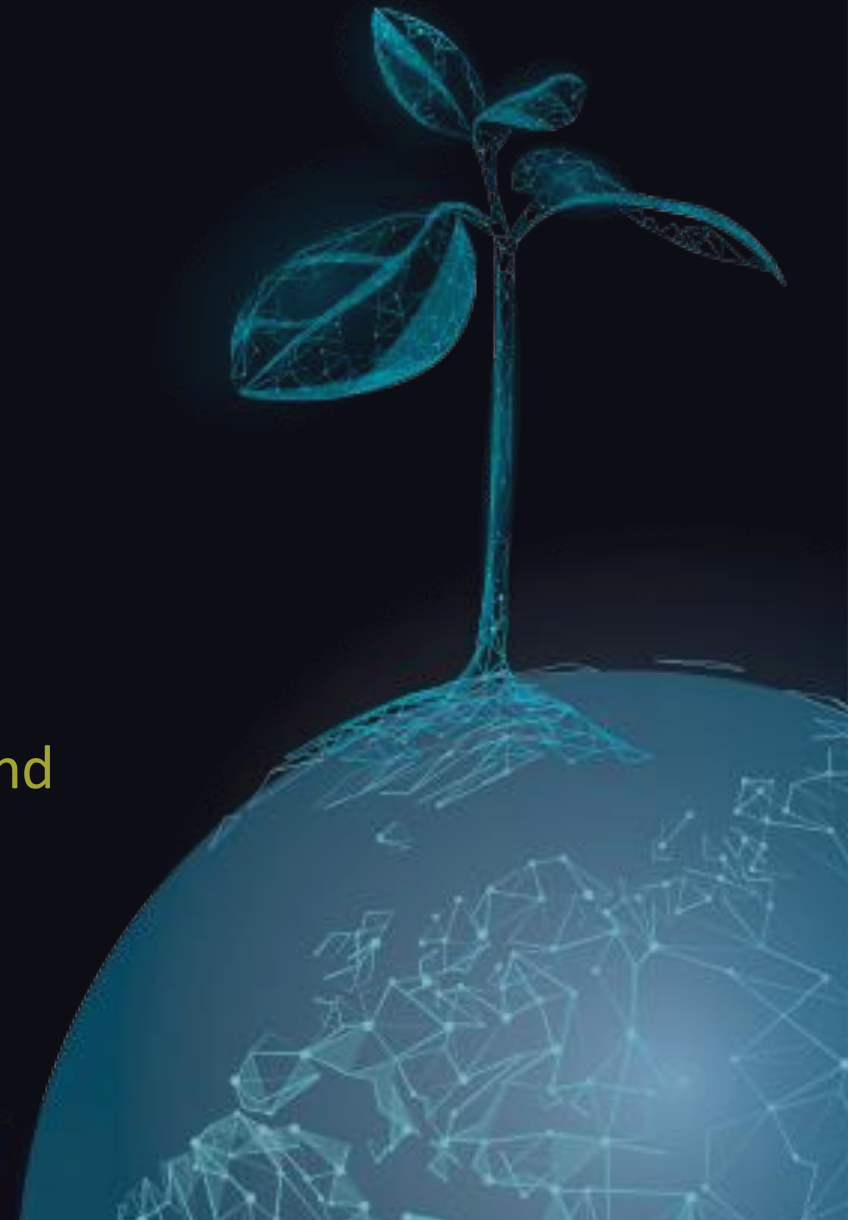




*Plant quarantine and
diagnostics
in the South African
regulatory environment*

Nolan Africander | Plant Quarantine and
Diagnostic Services,
National Department of Agriculture



PLANT QUARANTINE AND DIAGNOSTICS IN THE SOUTH AFRICAN REGULATORY ENVIRONMENT

NOLAN AFRICANDER
26 May 2026



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OUTLINE

1. Introduction
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4. Integrated national quarantine and diagnostic infrastructure
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7. Established plant health diagnostic networks
8. Successes and Economic gains from plant health diagnostic networks
9. South African perspective on plant health diagnostic networks
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11. Way forward and conclusion



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INTRODUCTION

Countries at risk of the introduction of exotic pests

Quarantine and diagnostics important to safeguard against plant quarantine pests

Our current legislation Agricultural Pest Act 1983 mandates the Department to safeguard its agricultural and natural resources

Lack of investments in diagnostic and quarantine capacity

The problem is further complicated as pests can evolve and survive – R&D

Failure to rapidly respond to new threats - food insecurity, loss of markets, unemployment and low economic growth

Countries require good diagnostic capabilities - improvise

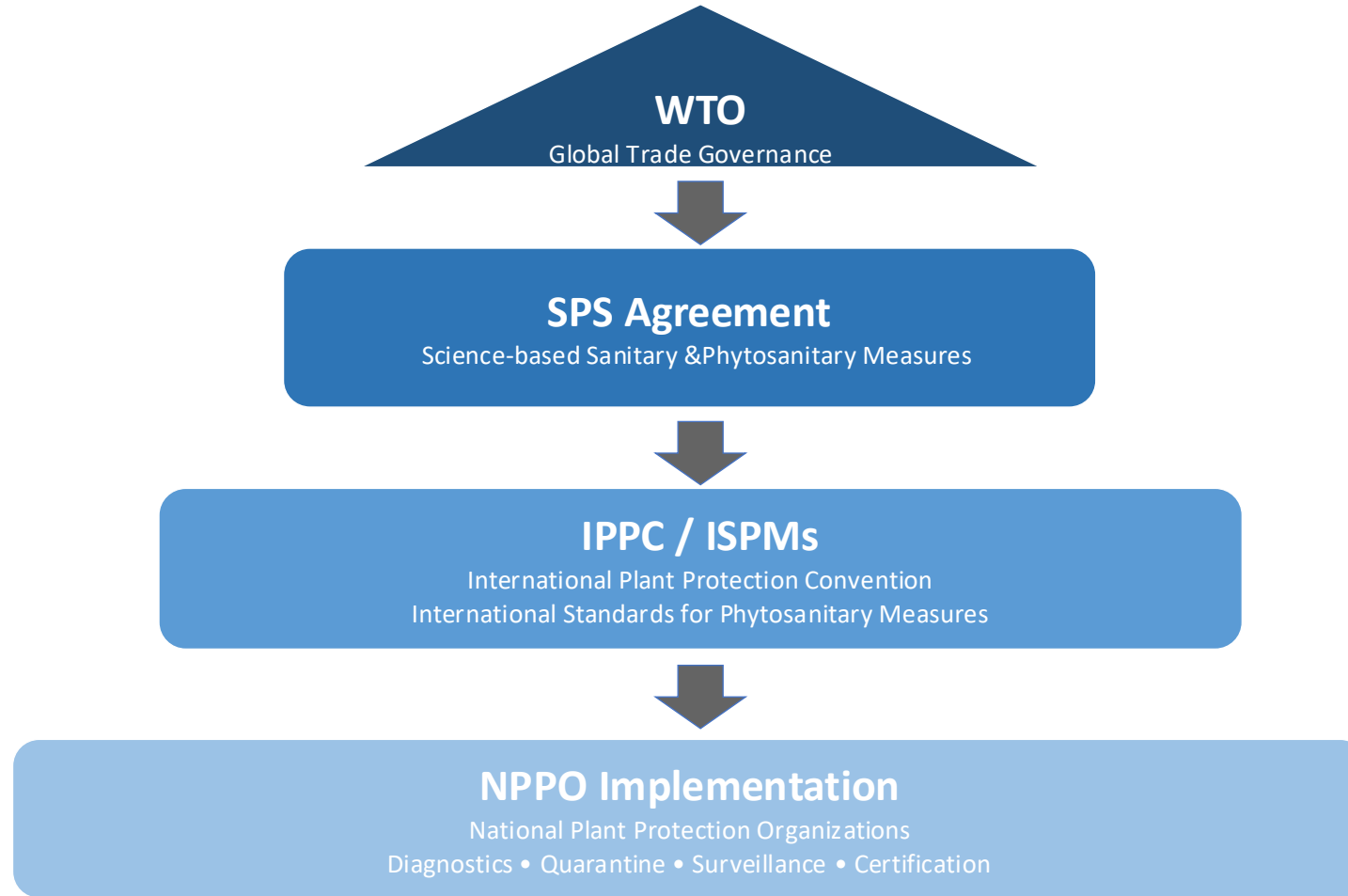


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GOVERNANCE STRUCTURES



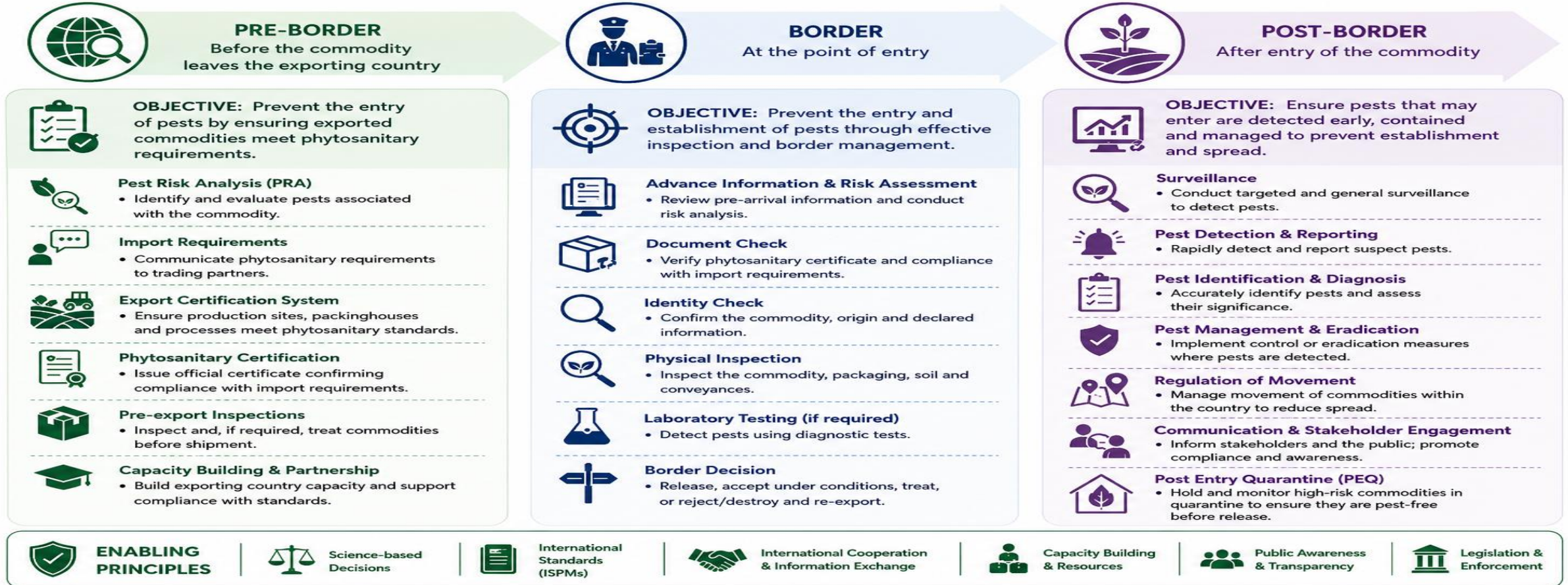
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MANAGING PHYTOSANITARY RISKS

Integrated Activities Across the Trade Continuum



Effective management of phytosanitary risks at each stage protects plant health, facilitates safe trade, and supports food security and biodiversity.



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INTEGRATED NATIONAL QUARANTINE AND DIAGNOSTIC INFRASTRUCTURE

FACILITY TYPE	FACILITY LOCATION	FUNCTION	STATUS
Plant Quarantine Station	Buffelspoort, Marikana	PEQ and containment	Government
Plant Quarantine Station	Stellenbosch, Western Cape	PEQ and containment	Government
National Plant Diagnostic Laboratory	Stellenbosch, Western Cape	Phytosanitary testing services	Government
Diagnostic Laboratory	Pretoria, Gauteng	Phytosanitary testing services	Government
Diagnostic Laboratories	Agricultural Research Council	Phytosanitary testing services	Outsourced/Partner facility
Tropical and Subtropical Post Entry Quarantine facility	Agricultural Research Council, Nelspruit, Mpumalanga	PEQ for tropical and subtropical crops and germplasm	Outsourced/Partner facility
Biocontrol agents quarantine facility	ARC, Roodeplaat, Pretoria, Gauteng	Quarantine containment of biocontrol agents	Outsourced/Partner facility
Sugarcane quarantine facility	SASRI Durban, KZN	Quarantine of imported sugar cane	Outsourced/Partner facility



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CURRENT CONSTRAINTS EXPERIENCED BY NPPOZA

Increasing trade volumes and faster movement of commodities

Balancing trade facilitation with phytosanitary protection

Growing pressure from climate change and emerging pests

Limited and unsustainable funding

Aging laboratory and quarantine infrastructure

Shortage of skilled diagnosticians



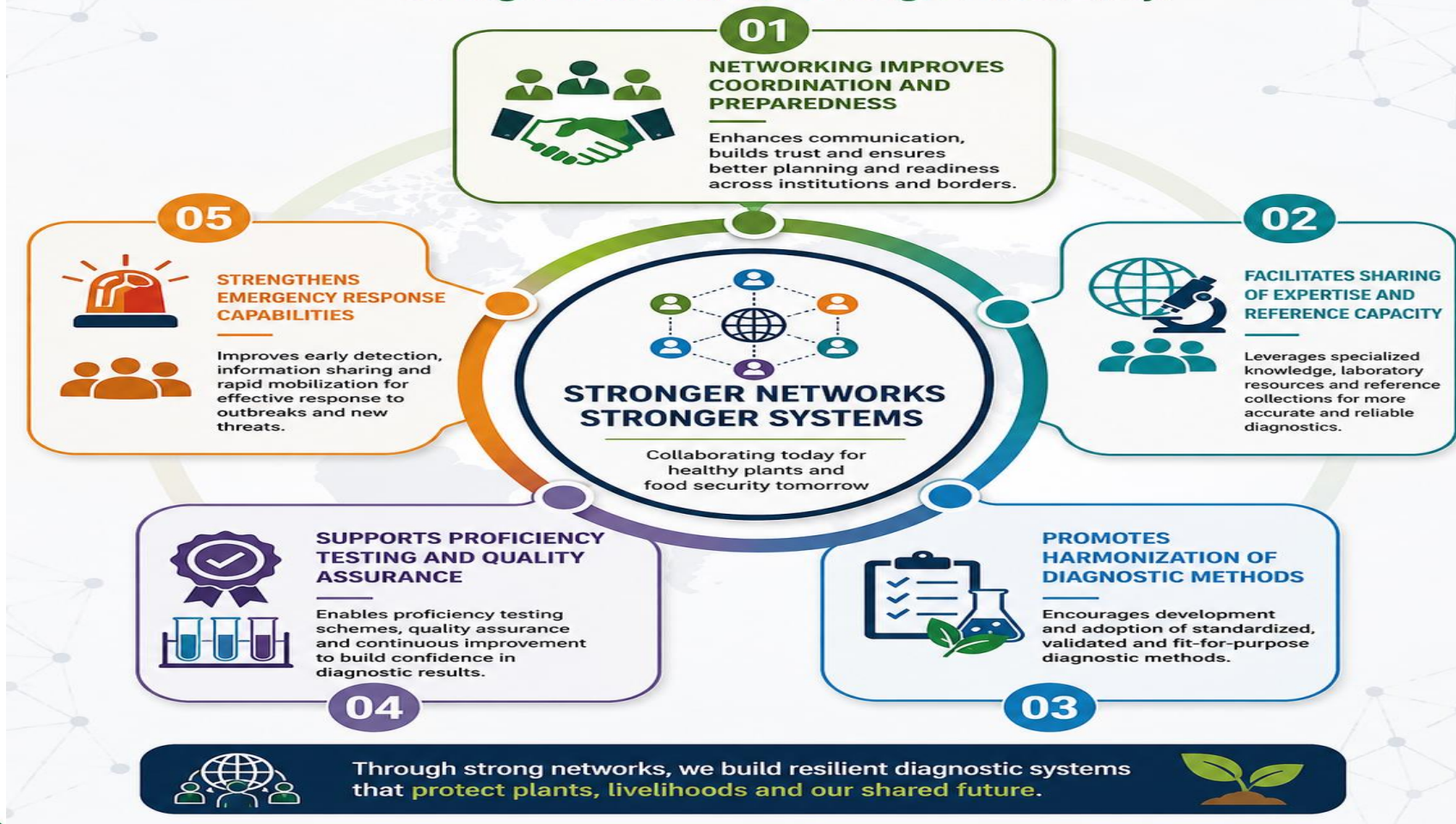
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THE POWER OF NETWORKING

Stronger Connections. Stronger Biosecurity.



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ESTABLISHED PLANT HEALTH DIAGNOSTIC LABORATORY NETWORKS

Feature	 NPDN NATIONAL PLANT DIAGNOSTIC NETWORK	 NATIONAL PLANT BIOSECURITY DIAGNOSTIC NETWORK		 IPDN (International)	
Established	2002	2011	1998	2005	2011
Scope	National	National	EPPO Member Countries	Regional (Central/East/West Africa, Central America)	10 Member countries in Asia
Structure	126 labs, 260+ members	Integrated network	Network	Regional hubs	Distribution of National Diagnostic Networks
Focus	Biosecurity, diagnostics	Biosecurity, diagnostics	Biosecurity, diagnostics	Capacity building, diagnostics	Disease identification
Key Features	National Data Repository, regional networks	National Diagnostic Protocols, proficiency testing	Standard setting in diagnostics	Training, data sharing	Capacity building in human capital and diagnostics



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SUCCESSSES AND ECONOMIC GAINS FROM PHDN's

U.S. NPDN early detection and response to *Phytophthora ramorum*

EPPO successfully developed and disseminated standardized diagnostic protocols

ASEAN has **advanced pest diagnostic capacity**, more **consistent identification and reporting** of quarantine pests

In Africa, diagnostic initiatives have **strengthened monitoring** - Fall Armyworm (*Spodoptera frugiperda*) and Cassava Brown Streak Virus, directly contributing **to food security protection**.

Early detection and coordinated responses **reduce the costs** of pest eradication and management, **generating substantial savings**

Minimizes trade disruptions, thus **enabling economic growth and market access**



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SOUTH AFRICAN PERSPECTIVE ON PHDN's

No PHDN in South Africa

Diagnostic capacities operate in silos

Various levels of diagnostic infrastructure and resources

NPPOZA approves laboratories in terms of ISPM45 to support its mandate

Agricultural Research Council (ARC) that supports NPPOZA mandate and performs research to support biosecurity

ISPM 45: Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions



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SOUTH AFRICAN PERSPECTIVE ON PHDN's

National Biosecurity Hub (NBH) was established to strengthen how the country manages threats to plant, animal and food health

NBH supports PHDN

Outcomes from recent Biosecurity Summit is to:

- develop a national action plan for government-industry collaboration in diagnostic networks
- accredit more laboratories based on **ISPM 45**
- standardize and validate diagnostic methods
- improve communication and data-sharing and audit existing capabilities and platforms

NEED TO LEVERAGE ALL THE RESOURCES TO FORM A NETWORK TO SUPPORT BIOSECURITY AND FOOD SECURITY



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PROGRESS ON DIAGNOSTIC LABORATORY NETWORKS (DLN)

A CPM Focus Group on Diagnostic Laboratory Networking (FGDLN) was formed and has regional representation. The African region has two representatives:

Dr. Florence Munguti and Mr. Nolan Africander

DLN was also on the agenda of last CPM where recommendations were made to the FGDLN

The FGDLN has a Terms of Reference and will meet to prioritise the objectives of DLN



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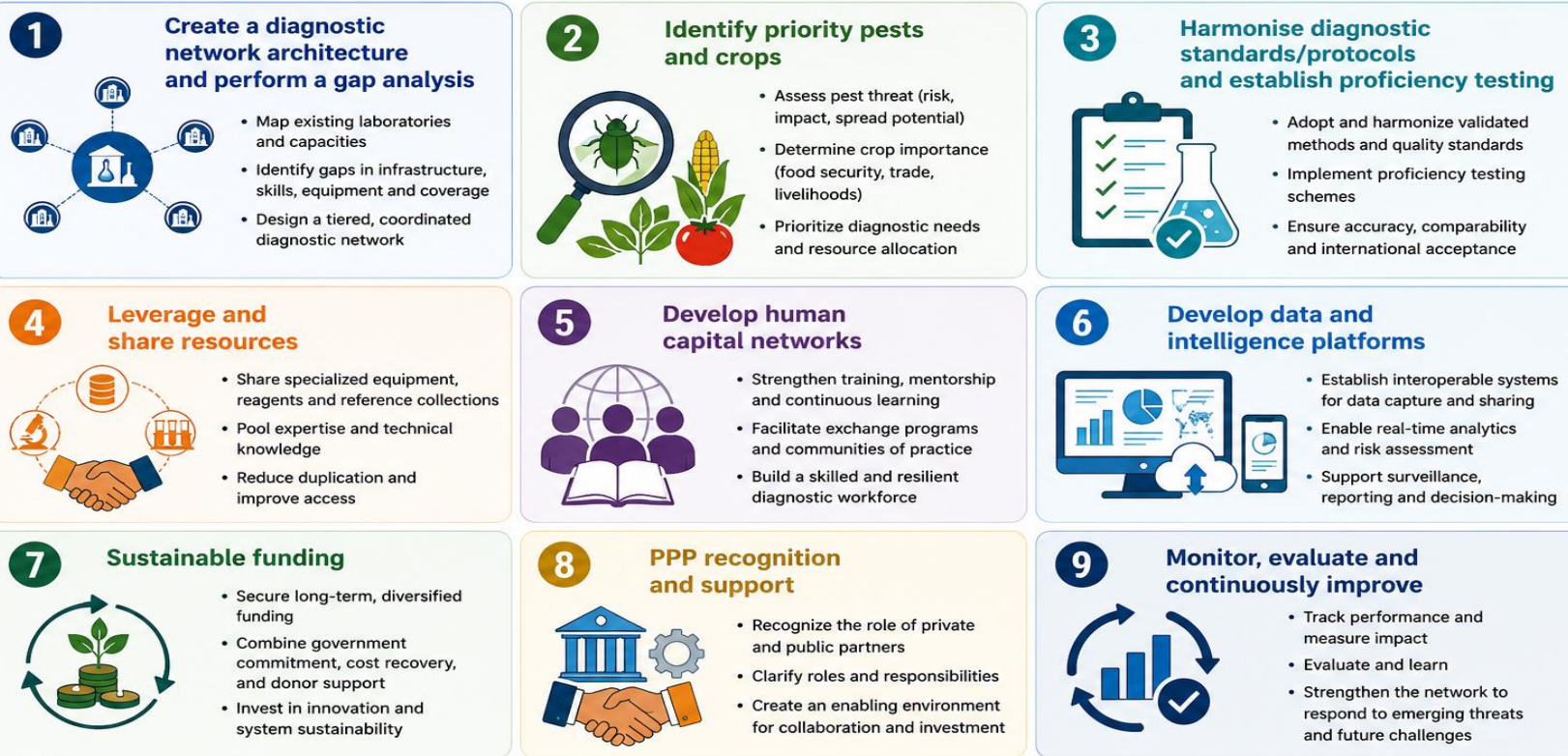
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WAY FORWARD ON PHDN

BUILDING STRONG DIAGNOSTIC SYSTEMS TOGETHER

COLLABORATE • STANDARDISE • SHARE • SUSTAIN



Stronger networks. Better diagnostics. Protected crops. Food security and resilient economies.



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CONCLUSION

The future of phytosanitary diagnostics and quarantine is networked, digital, predictive and multidisciplinary. No single NPPO can sustainably maintain all required technologies, expertise and infrastructure alone



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THANK YOU



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