TOWARDS A SPATIALLY-ENABLED SOCIETY: BUILDING THE NAMIBIA SPATIAL DATA INFRASTRUCTURE

Alex Mudabeti[1] and Esther Simasiku[2]

[1]Executive, GIS and NSDI Coordination, Namibia Statistics Agency

[2]Senior Corporate Communication Specialist, Namibia Statistics Agency

[1]Email: AMudabeti@nsa.org.na

[2]Email: ESimasiku@nsa.org.na

FOR AFRICA GIS CONFERENCE 2019,

18-22 NOVEMBER 2019, KIGALI, RWANDA

Namibia Statistics Agency

OUTLINE

1. NSDI LEGAL FRAMEWORK IN NAMIBIA

2. FINDING A SDI MODEL

3. NAMIBIA SDI APPROACH

4. STRATEGY FOR FUNDING
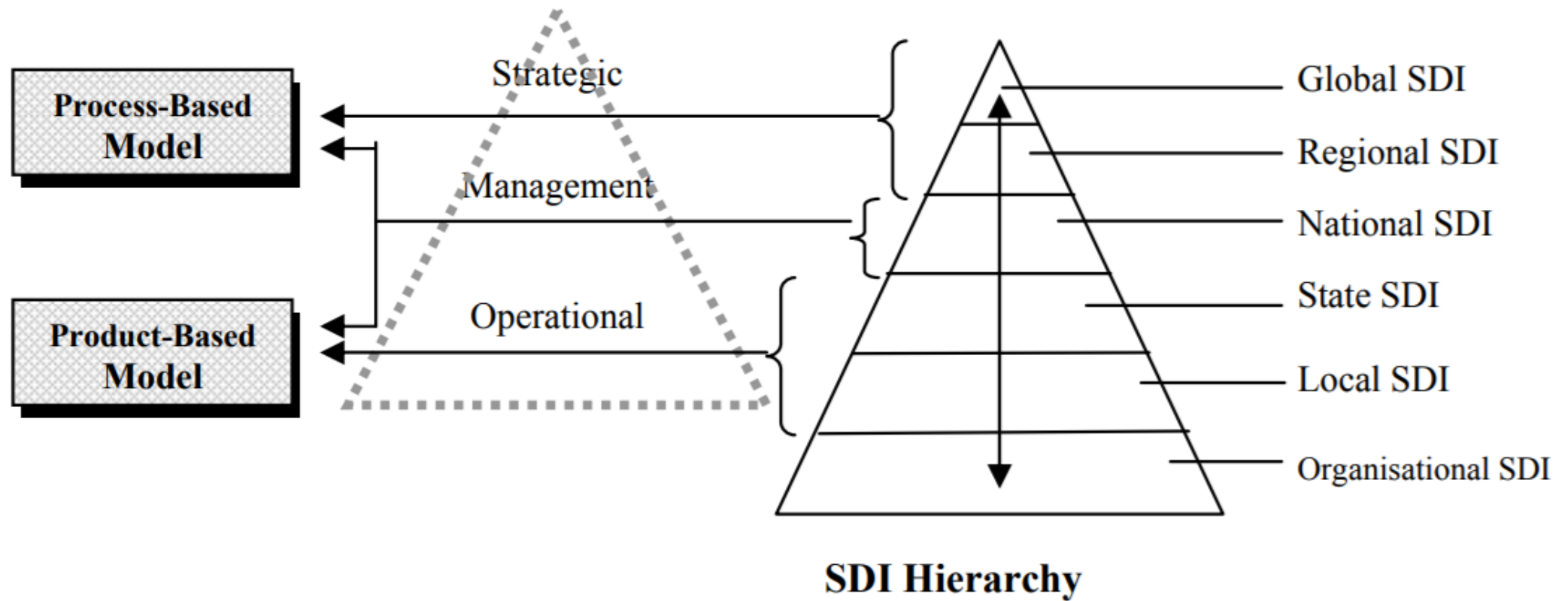
5. CHALLENGES

6. SUMMARY LESSON LEARNED

7. NSDI BENEFITS

1. NSDI LEGAL FRAMEWORK IN NAMIBIA

- **…**fundamentally about facilitation and coordination of the exchange and sharing of spatial data between stakeholders.

- Statistics Act, No. 9 of 2011
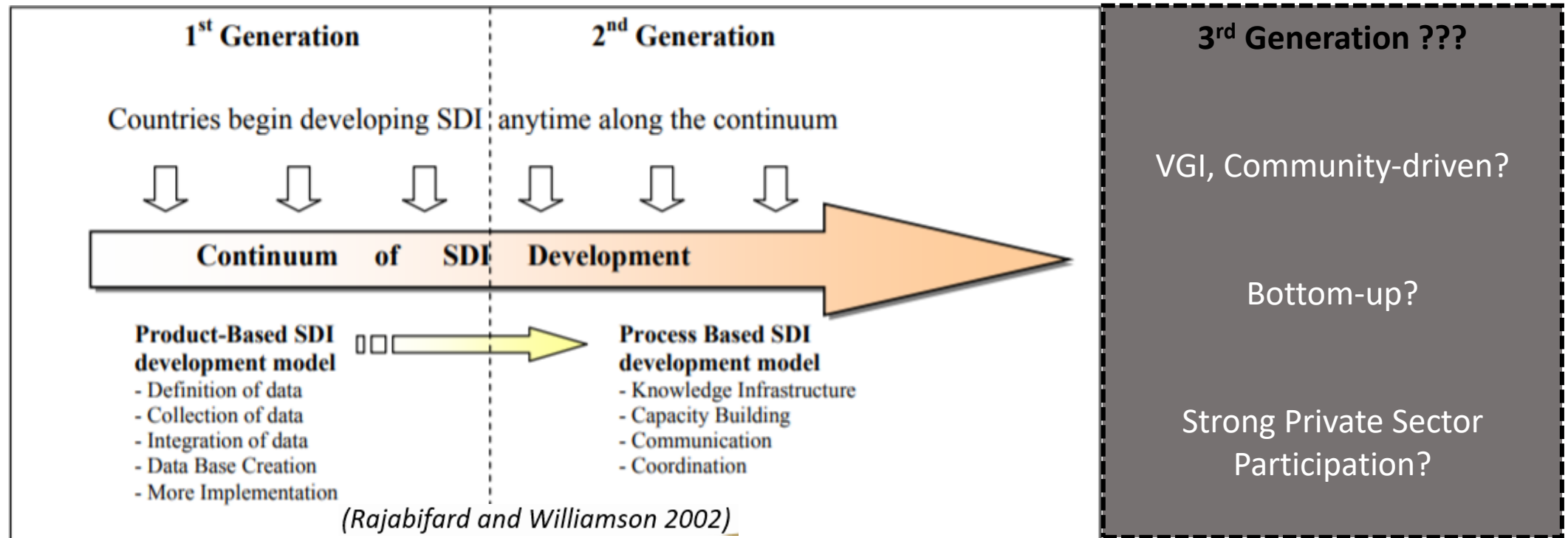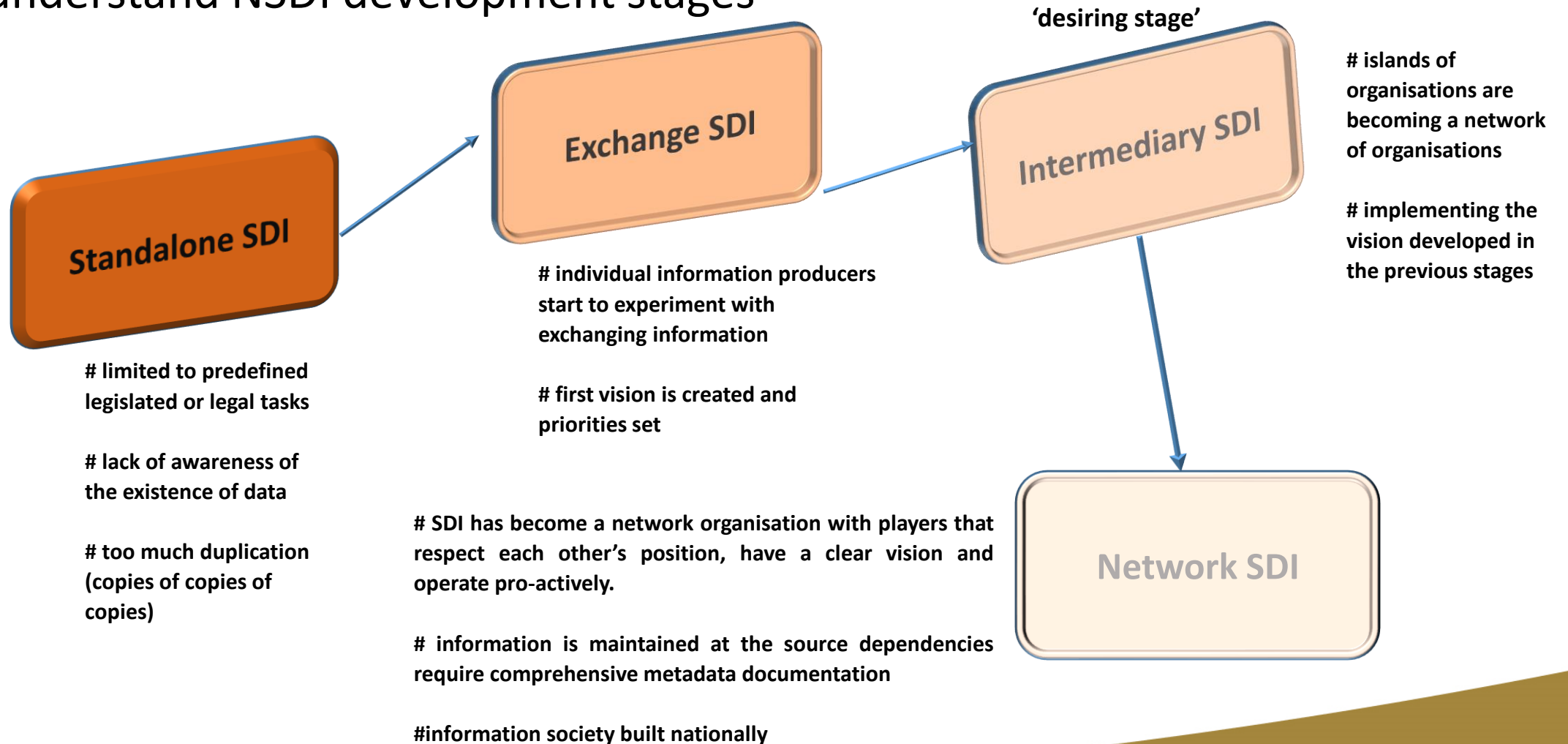
2. FINDING A MODEL
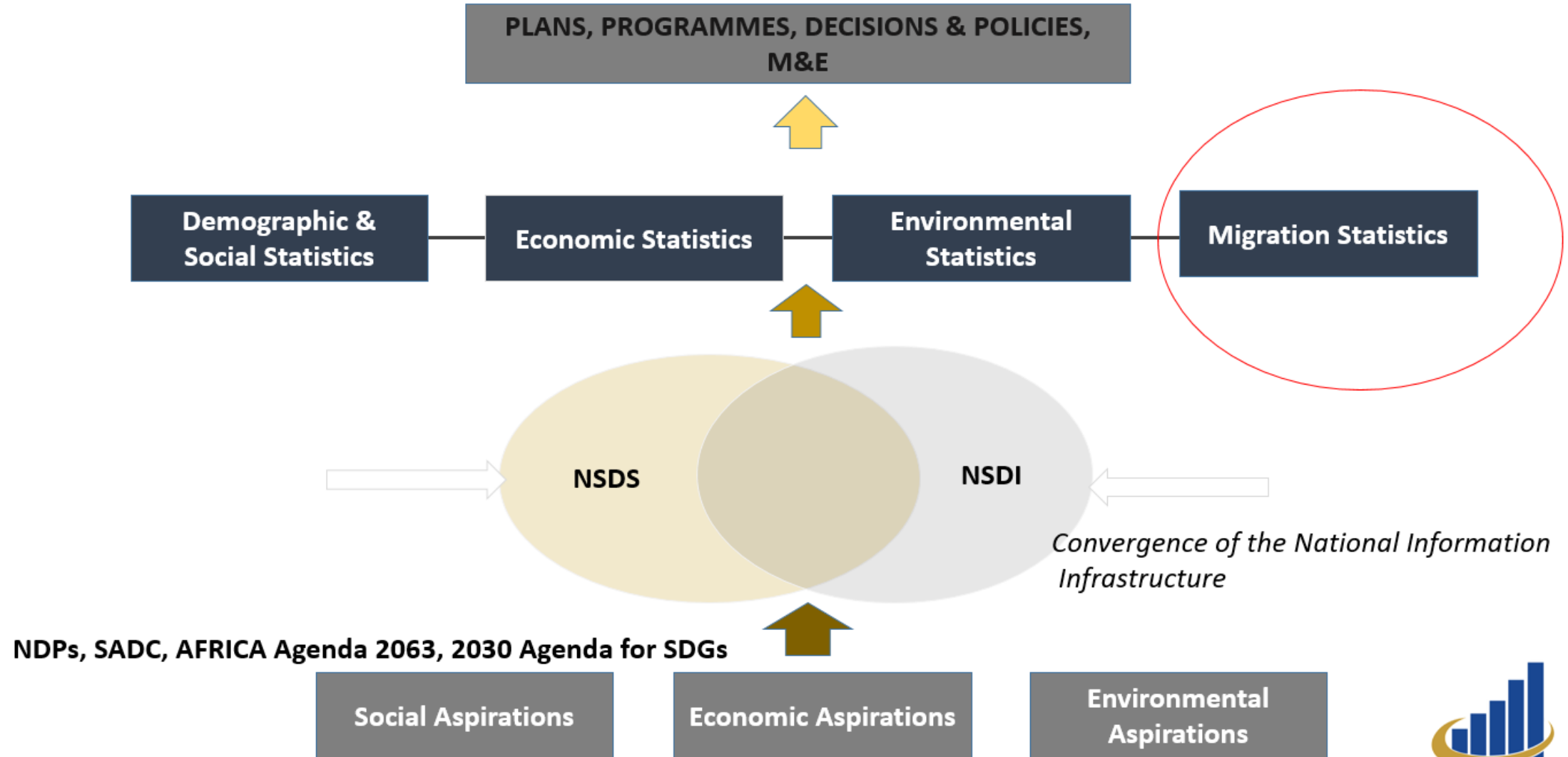
Relationships between SDI hierarchy and different models of SDI development (Rajabifard and Williamson 2002)

1. Product-based model - This model according to Rajabifard (2002) links data to users through standards, policies and technologies facilitating data access.
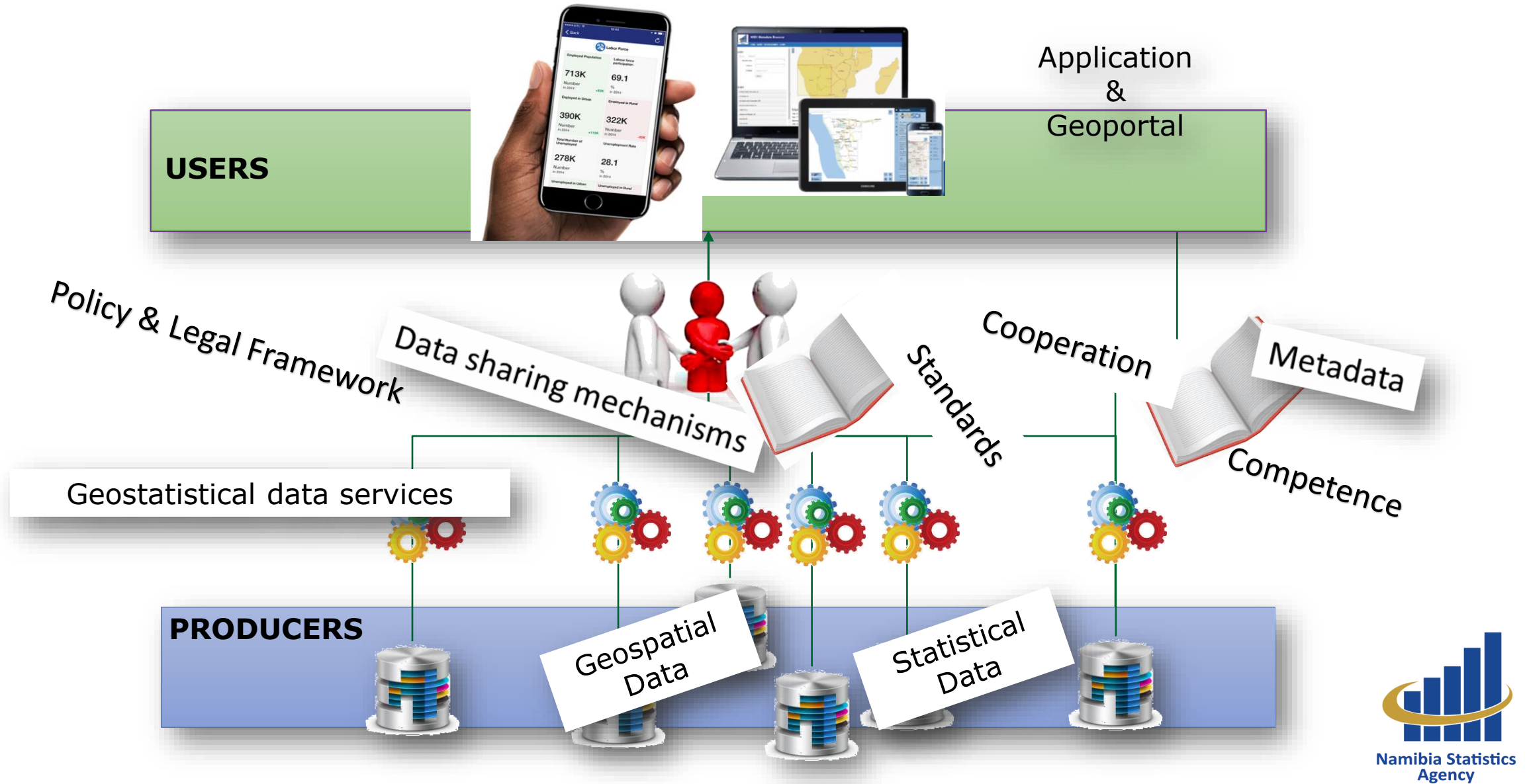

2. Process-based model - emphasises on the different processes within the infrastructure.

....understand NSDI development stages

Standalone SDI

Exchange SDI

Intermediary SDI

'desiring stage'

Network SDI

islands of organisations are becoming a network of organisations

implementing the vision developed in the previous stages

individual information producers start to experiment with exchanging information

first vision is created and priorities set

limited to predefined legislated or legal tasks

lack of awareness of the existence of data

too much duplication (copies of copies of copies)

SDI has become a network organisation with players that respect each other's position, have a clear vision and operate pro-actively.

information is maintained at the source dependencies require comprehensive metadata documentation

#information society built nationally

A National Geo-statistical Data Infrastructure

USERS

Application & Geoportal

Policy & Legal Framework

Data sharing mechanisms

Cooperation

Standards

Metadata

Competence

Geostatistical data services

PRODUCERS

Geospatial Data

Statistical Data

Namibia Statistics Agency

Adapted from part of Victoria's Spatial Information Management Framework, Second Edition, 2009
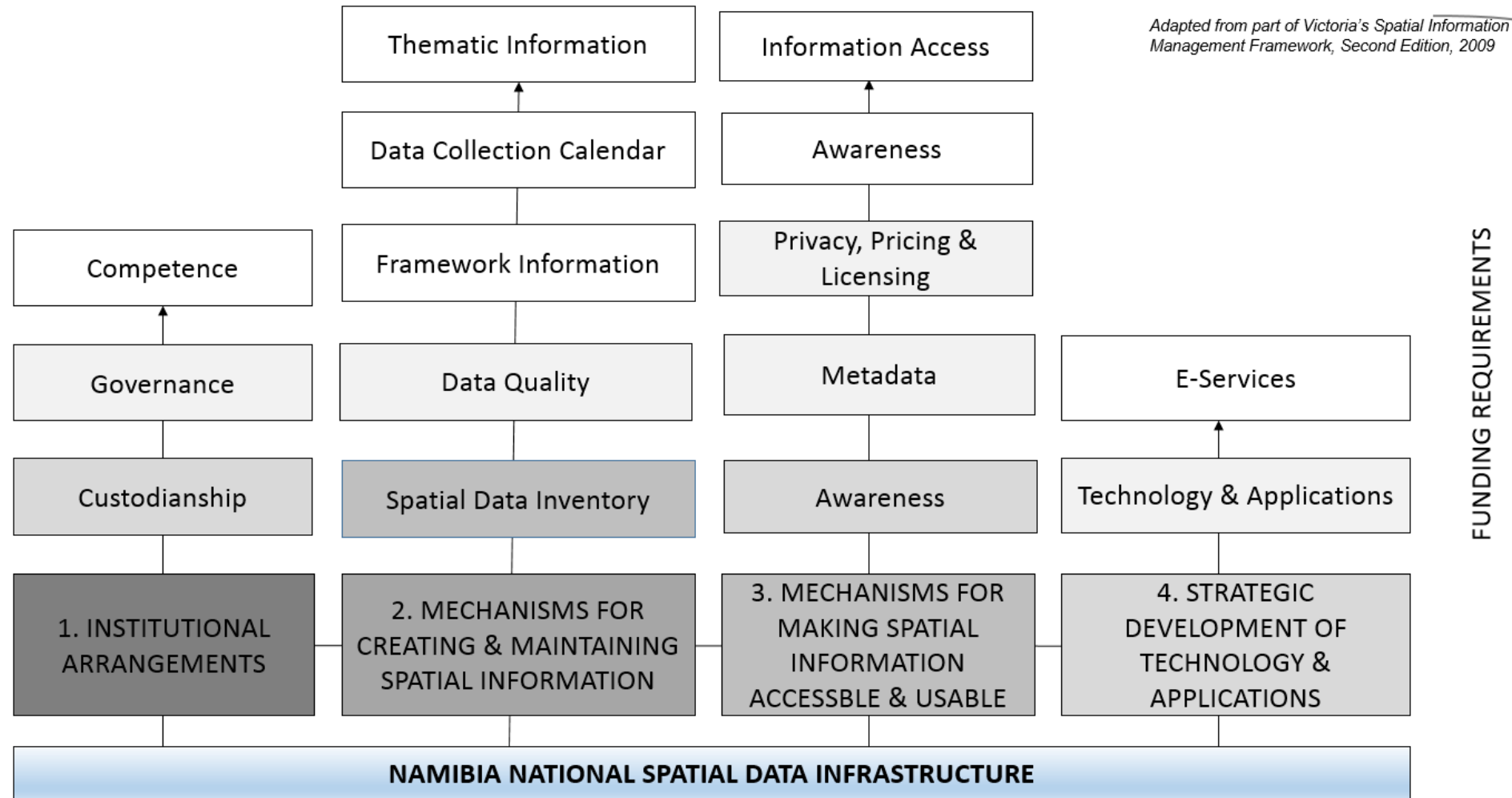
USE OF FUNDAMENTAL GEOSPATIAL DATA THEMES

Spatial Plans	Urban Plans	Topo Maps

Level III (13)

Education	Health	Environment & Conservation	Tourism	Agriculture & Aquaculture	Hydrology & Inland Water	Climate & Weather

Demography	Business & Economy	Society, Culture & Heritage	Disaster Risk Management	Oceanography & Marine	Utilities

Level II(4)

Geoscientific	Land cover	Imagery	Elevation

Level I(5)

Addresses	Cadastral	Geographic Names	Admin Boundaries	Transport Networks

Coordinate Reference Systems

Geographic Grids

22 x Main Fundamental Data Themes

Namibia Statistics Agency

delivering **Right information to planners, decision and policy makers...**
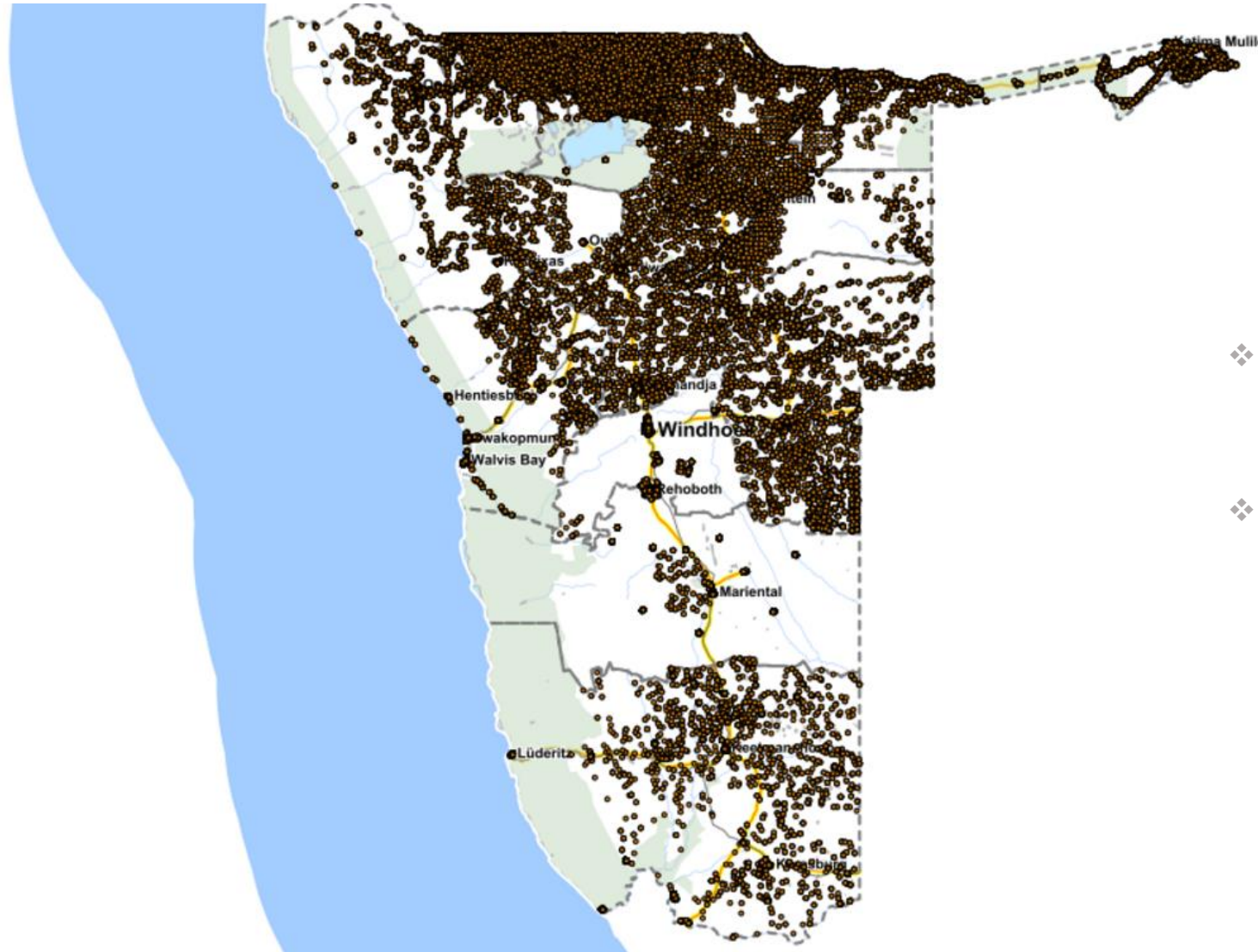
❖ a list of all structures in the country with a geographic or spatial reference

❖ A dot represents a homestead in rural areas and dwelling structure in urban.

Example: Towards Semi-Formal to Formal Addresses

1. Short-term funding

- Government budget (1 – 5 years)

2. Medium-term funding (+5 years)

- To evolve around innovative financing mechanisms:
  - Partnerships;
  - contribution from large stakeholders e.g. utility companies through the NSDI fund;
  - non-monetary contributions (technical personnel, donations, etc.);
  - grants from development partners;
  - alignment of SDI activities to special national projects;
  - licensure.

Namibia Statistics Agency

3. Long-term funding model (+10 years)

- Private sector investment
- capital investment
- re-investment of returns (royalties, sales, charges, etc.)
- special taxation (taxes on geo-ICT products and services).

Namibia Statistics
Agency

1. Incoherent legal and policy frameworks – makes it difficult to coordinate

2. Digitalisation of land records; outdated data; no data maintenance plans

3. Limited capacity (technical & human)

4. Overcoming scepticism – privacy & confidentiality issues of geospatial information

5. Raising political awareness.

Namibia Statistics Agency

5. LESSON LEARNED

Coordination is one of the most important aspects in the development of an SDI,... [and includes]

- leadership,
- mediating inter-agency conflicts,
- sustaining political support,
- selling the benefits to multiple audiences,
- providing technical guidance and enforcement of common standards,
- raising awareness and disseminating the results.

"Partnerships and communication are the heart of SDI" (SDI Africa, 2010).

- "political support."
- "partnership"

Mwungu (2017)

- Awareness;
- commitment building;
- policies;
- directives and actions;
- institutional framework;
- funding and SDI implementation

Namibia Statistics Agency

7. NSDI benefits to sell at **national** level?

To the respondents:
1. Better service delivery and policies
2. Possibility to own a formal address
3. Emergency response e.g. shack fires, floods, drought, crime, etc.
4. Access to financing e.g. addresses

To the policy and decision makers:
1. All of the above plus
2. Better tax collection
3. New businesses, new markets, more government revenue
4. Accountability and transparency (leave no one behind) – win the election

Namibia Statistics Agency

To the data producers:
1. Better data management, data-driven decisions
2. Quality, timely and accessible national data
3. Motivation for state funding
4. Enhanced data sharing through partnerships, focus on core business
5. Elimination of duplication, reducing costs
6. Capacity, economies of scale

Namibia Statistics Agency

Thank You

Namibia Statistics Agency