

20 FEBRUARY 2019

# National Spatial Planning Data Repository



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA



## PRESENTATION OUTLINE

1. Progress Overview
2. Stakeholder Onboarding
3. Technical Solutions
4. Support & Training



# Progress Overview



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA



# EXECUTIVE SUMMARY // JANUARY 2019



















- The overall project *percentage complete* is approx. 90%, noting the following:
  - A total of 33 out of 36 project milestones have been completed.
  - Notable achievements include;
    - User Acceptance Testing sign-off, and
    - Solution readiness for deployment to a production environment.
  - The critical path is now positioned on the project's "Go-Live" phase, pending confirmation of a suitable hosting environment for this purpose.
  - The NSPDR will continue to be hosted in the Testing/Staging environment until it is migrated to a production environment. Which will take four weeks to complete.

## EXECUTIVE SUMMARY // CONTINUED...

- An official request to pilot the E-Lodgement application has been received from Lesedi Municipality, Midvaal and two municipalities in Free State at this stage. The project team will support the proof of concept/pilot during the months of March 2019.
- The project is ready to move to a Support phase.
  - It is now critical that the DRDLR confirms the way forward regarding a hosted environment for “Go-Live” purposes.
  - It is also now critical that the DRDLR confirm System and Data Administrators to be trained to provide first-line support to the NSPDR Ecosystem.

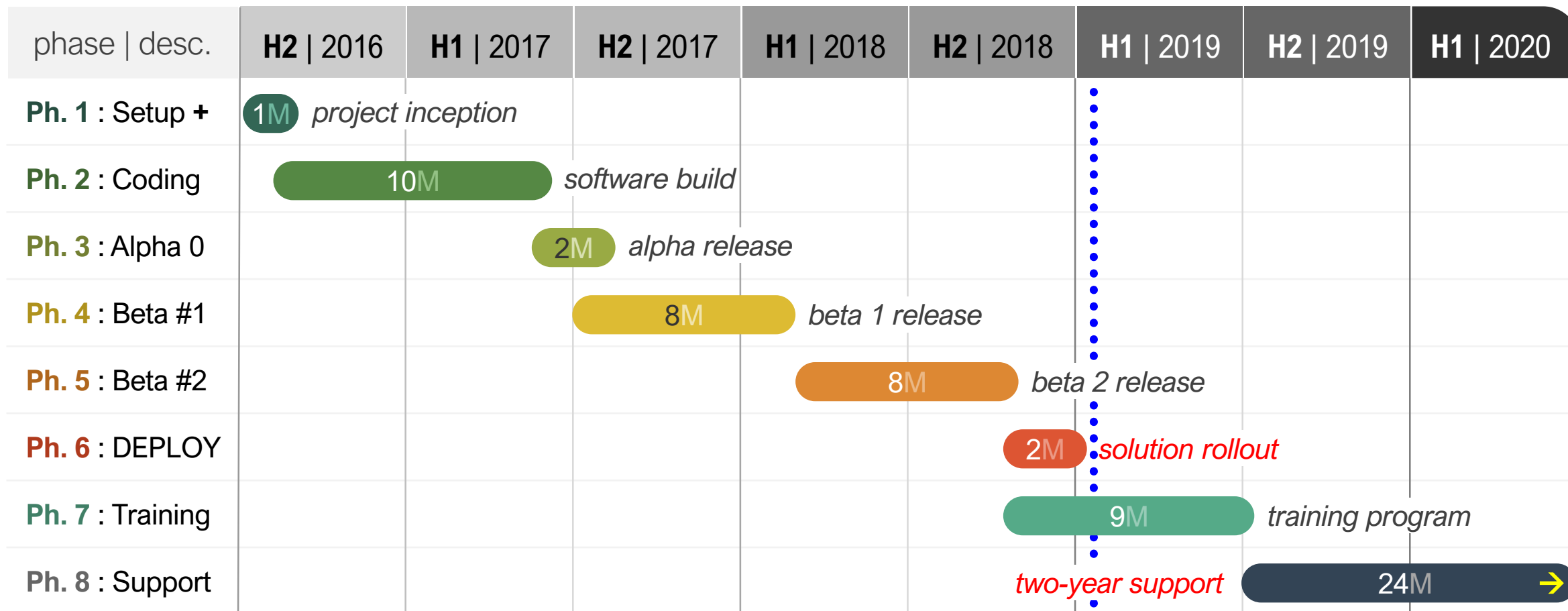


# QUALITY STATEMENT // HEALTH CARD

<b>schedule</b>	  	The original “Go-Live” date has now been postponed due to no permanent hosting environment to deploy NSPDR to.
<b>budget</b>	  	The project remains sufficiently capitalised.
<b>scope</b>	  	Continued stakeholder engagements and system testing is in progress.
<b>risks</b>	  	Interim mitigation plan is to use Esri's Afrihost cloud environment, pending a permanent solution.
<b>issues</b>	  	<b>Confirmed hosted (“cloud”) production environment.</b>
<b>quality</b>	  	Status moved to amber from green (see ‘risks’ section later in the presentation regarding Marketing).

# NSPDR > SCHEDULES

## PROGRAM SCHEDULE // 4-YEARS





# Stakeholder Onboarding



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA





# DEFINITIONS // STAKEHOLDER JOURNEY

## APPROACHED

- Date on which the data custodian and/or key stakeholder was first approached.
- This typically include the following:
  - Informal or impromptu meetings
  - Telephonic conversations
  - Email correspondence, and
  - Letters of request, etc.

## ENGAGEMENTS

- An engagement is defined as creating awareness of the NSPDR project, normally by presenting to an individual, or a group of stakeholders.
- It also assists in understanding the level of spatial competence, as well as a general view of the technical infrastructure within each area.

## DATA RECEIVED

- Date on which the data and/or documents were received or downloaded.
- Obtaining data involves the physical collection of spatial data, by means and acquisition of various media available to the custodians in question.



# CATEGORISATION // STAKEHOLDER CLASSES

## MUNICIPALITIES

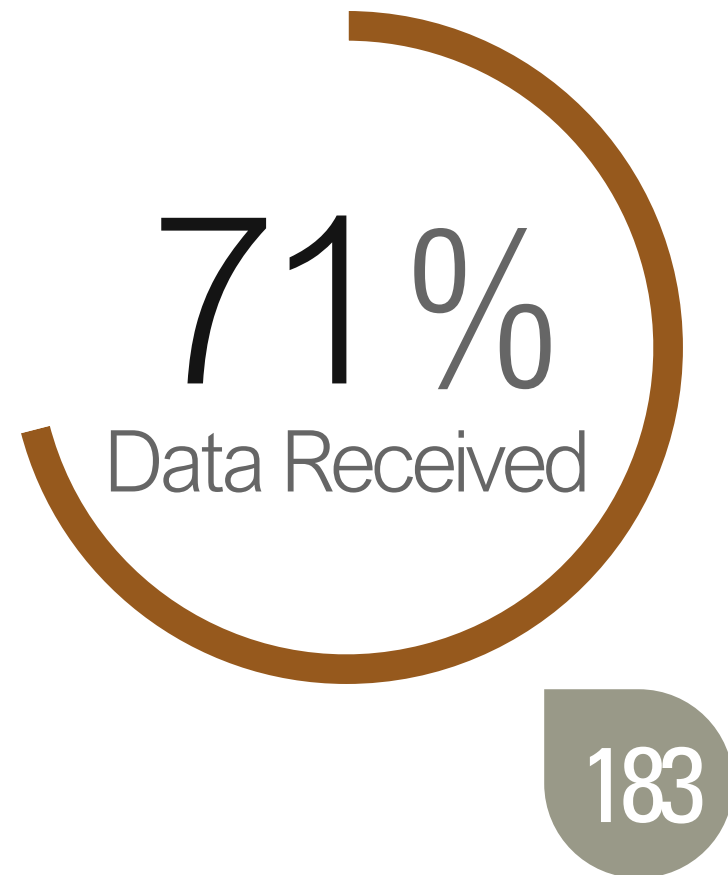
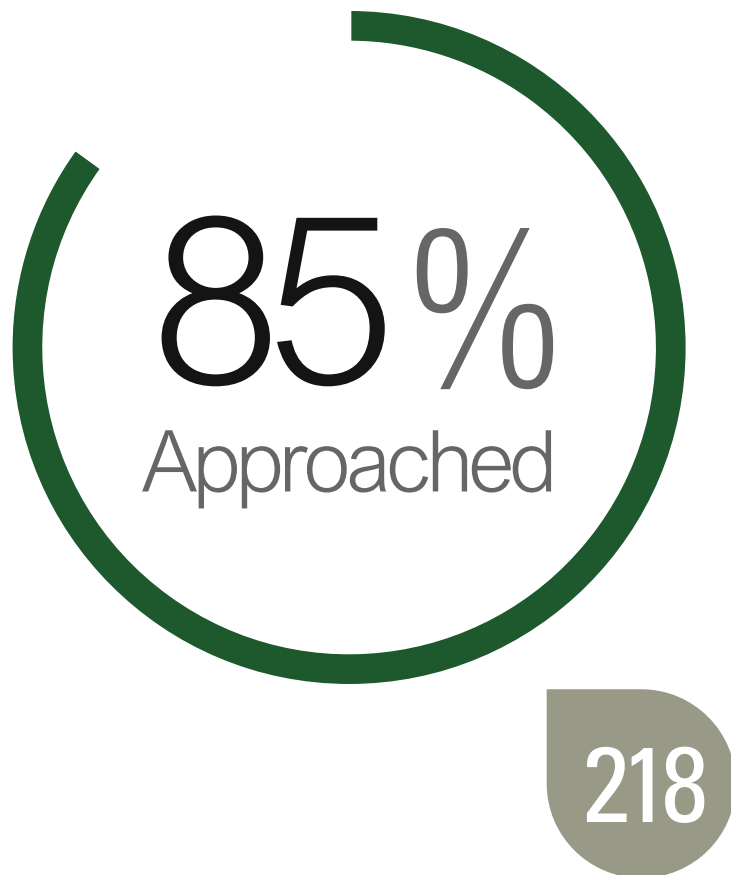
- **District** Municipalities  
(*Category C*)
- **Local** Municipalities  
(*Category B*)
- **Metropolitan** Municipalities  
(*Category A*)

## STATE INSTITUTIONS

- **National** Departments and Chief Directorates
- **Provincial** or Sector Departments
- **Parastatal** or State-Owned Entities
- **Research** Agencies or Bodies
- **Corporate** or Private Companies



NSPDR > ONBOARDING  
MUNICIPALITIES // DASHBOARD (257)



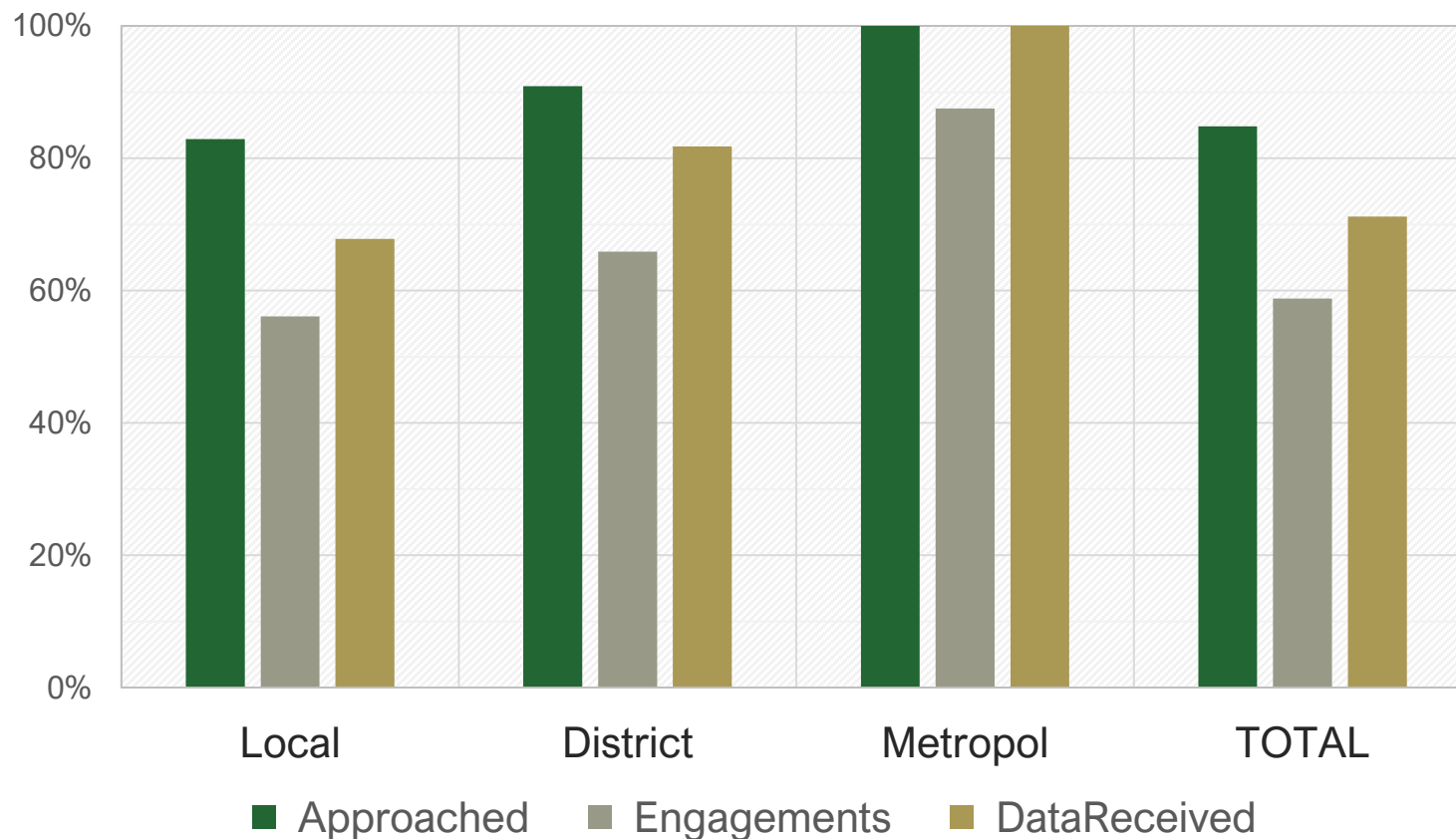
# NSPDR > ONBOARDING MUNICIPALITIES // BY TYPE (%)

## REPORT HIGHLIGHTS

@ 25 January 2019

*Engagements to date:*

- LOCAL: **56.1%**
- DISTRICT: **65.9%**
- METROPOL: **87.5%**







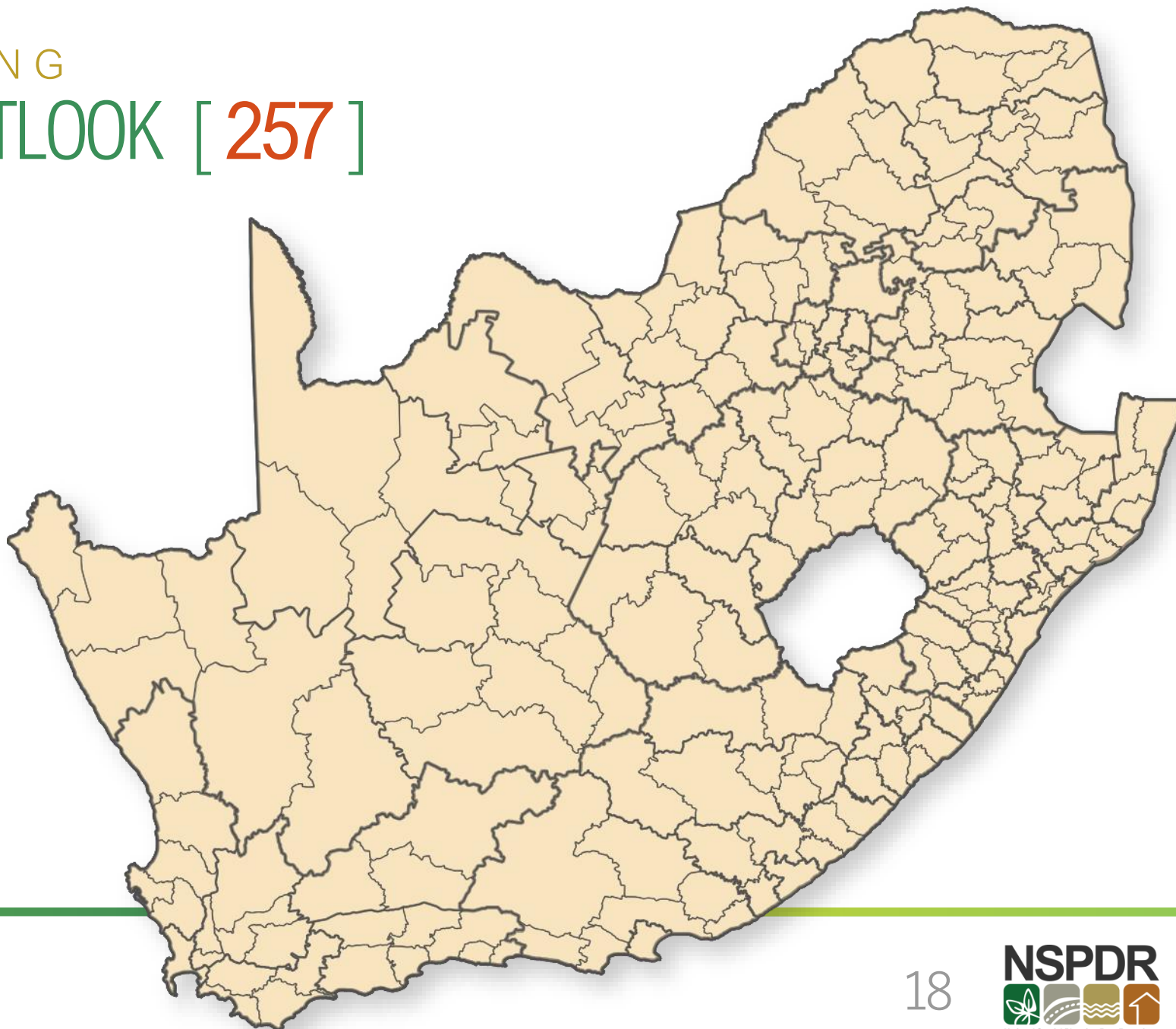
# NSPDR > ONBOARDING MUNICIPALITIES // OUTLOOK [ 257 ]

## QUICK EXPLANATION

@ 25 January 2019

### Map Legend:

- METROPOL = 
- DISTRICT = 
- LOCAL = 
- DM + LM = 



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA






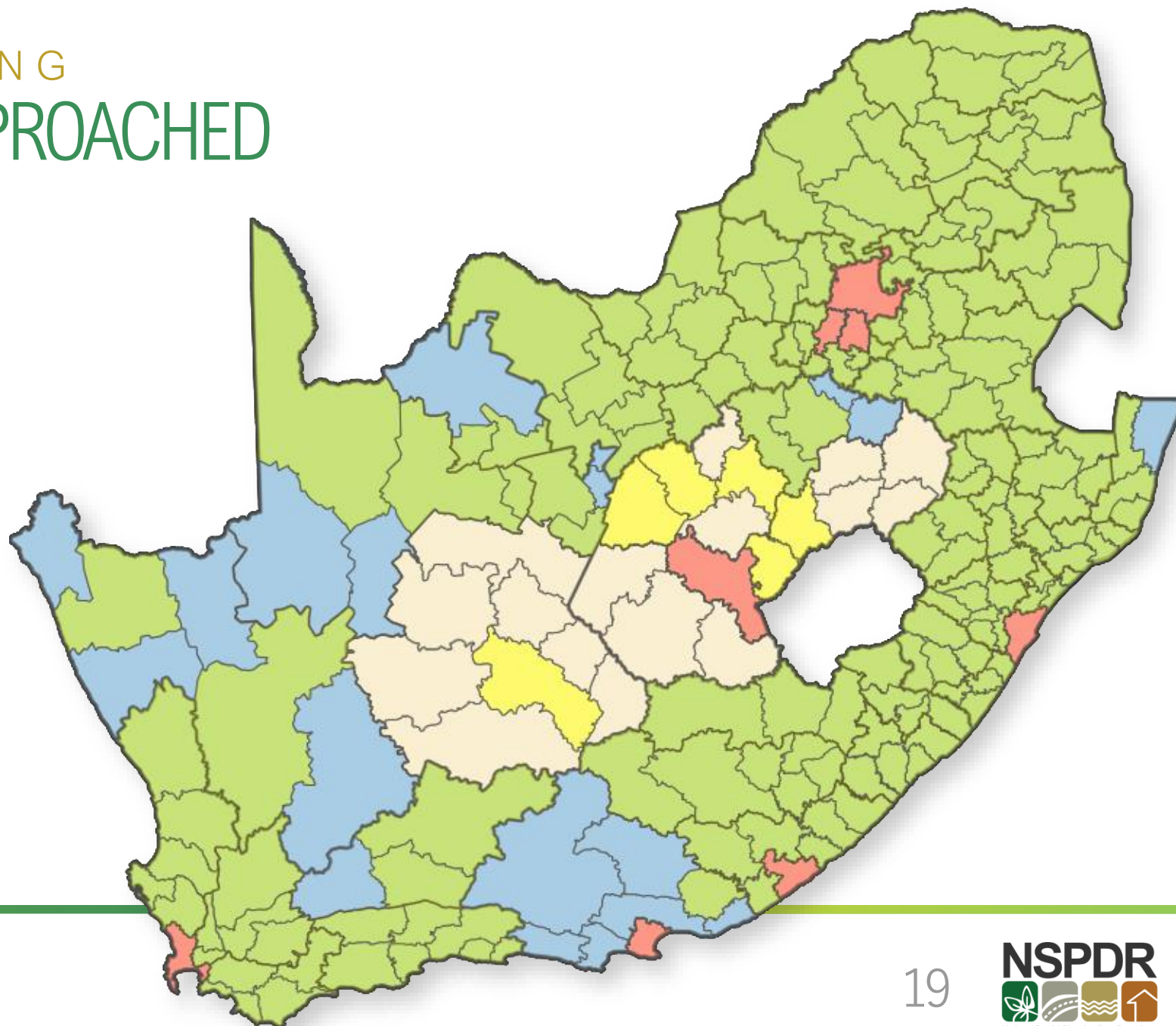
# NSPDR > ONBOARDING MUNICIPALITIES // APPROACHED

## REPORT ABSTRACT

@ 25 January 2019

*Approached:*

— METROPOL		<b>8</b>
— DISTRICT		<b>40</b>
— LOCAL		<b>170</b>
— TOTAL		<b>218</b>






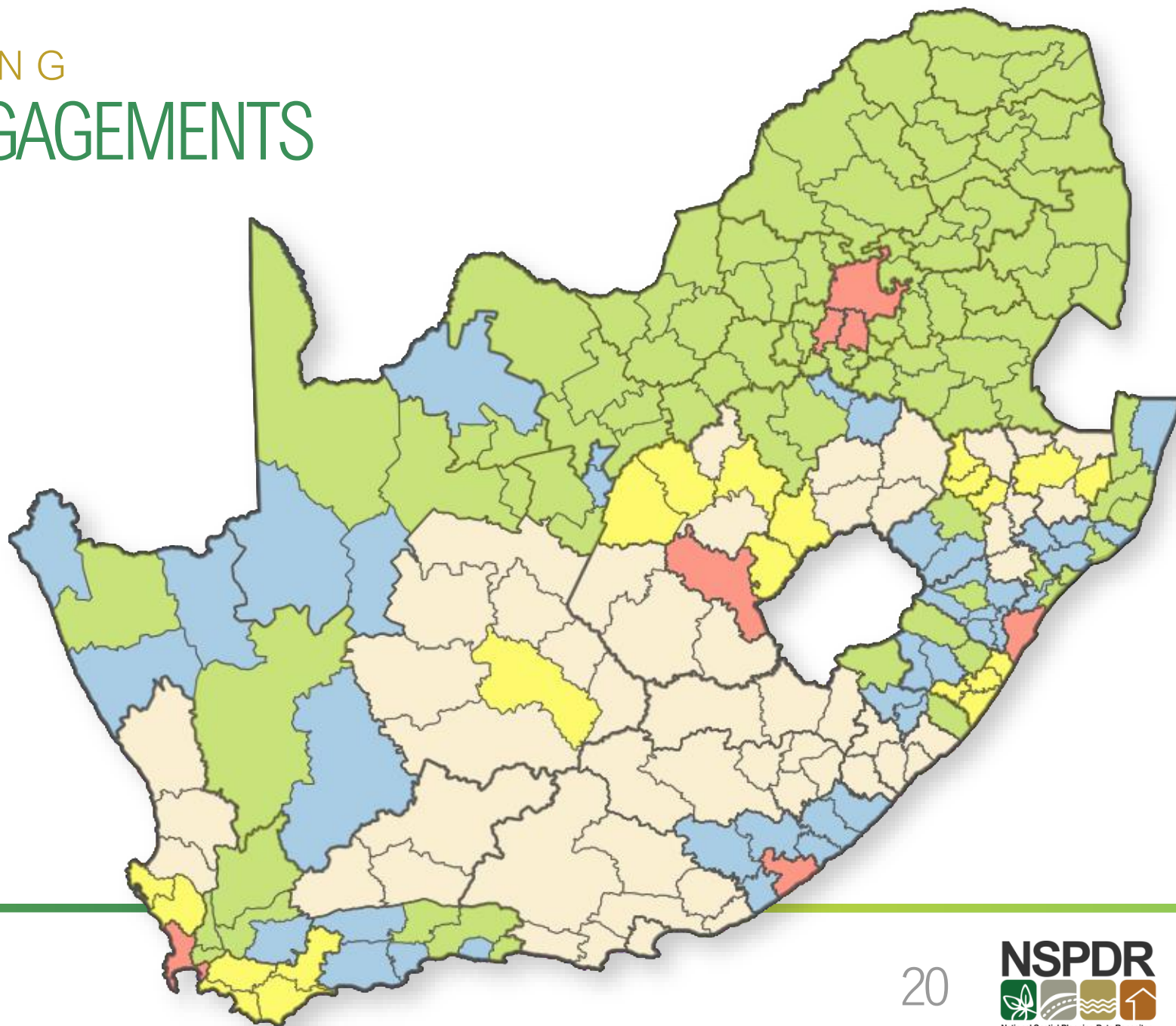
# NSPDR > ONBOARDING MUNICIPALITIES // ENGAGEMENTS

## REPORT ABSTRACT

@ 25 January 2019

### Engagements:

– METROPOL		<b>7</b>
– DISTRICT		<b>29</b>
– LOCAL		<b>115</b>
– TOTAL		<b>151</b>



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA






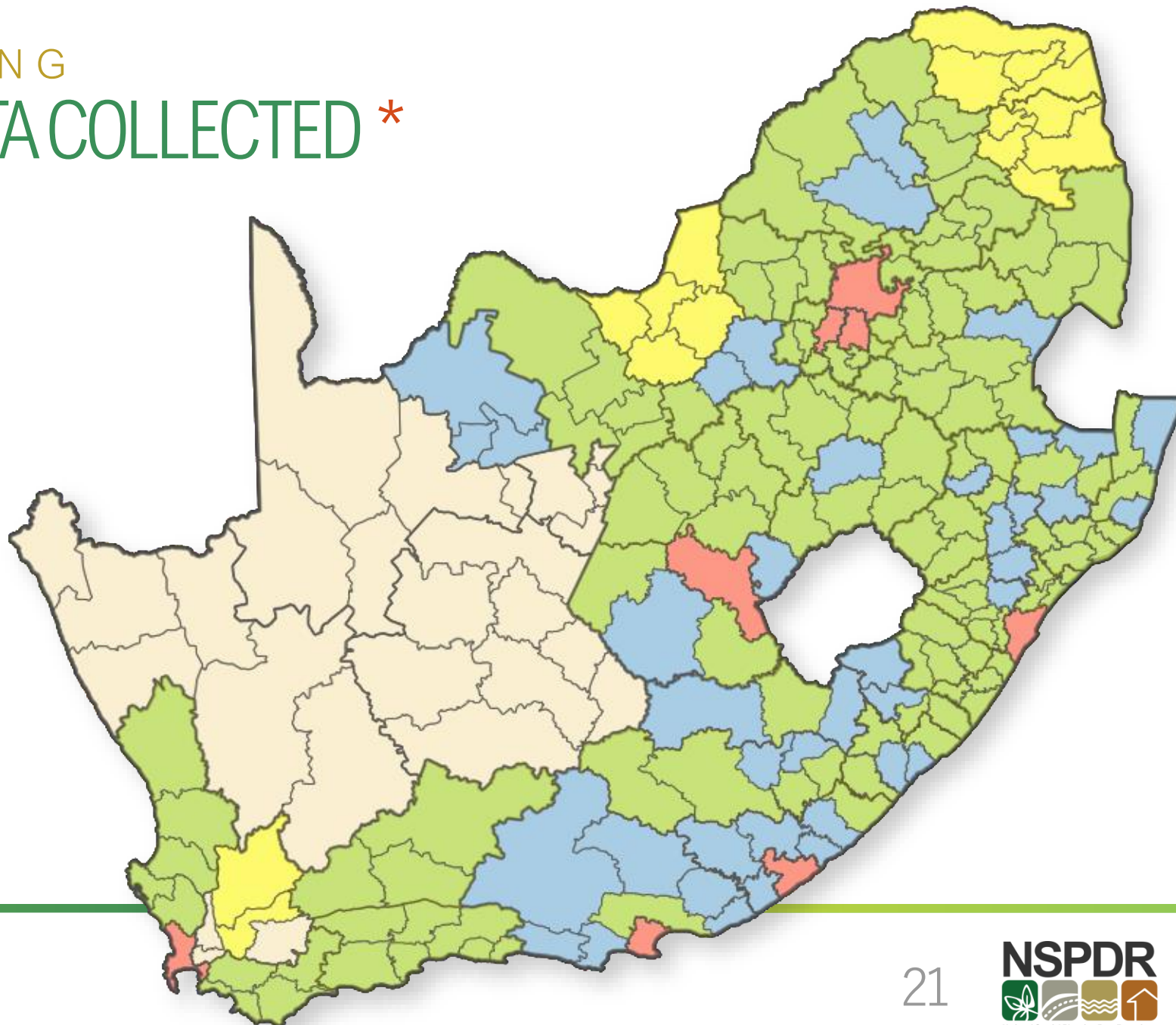
# NSPDR > ONBOARDING MUNICIPALITIES // DATA COLLECTED \*

## REPORT ABSTRACT

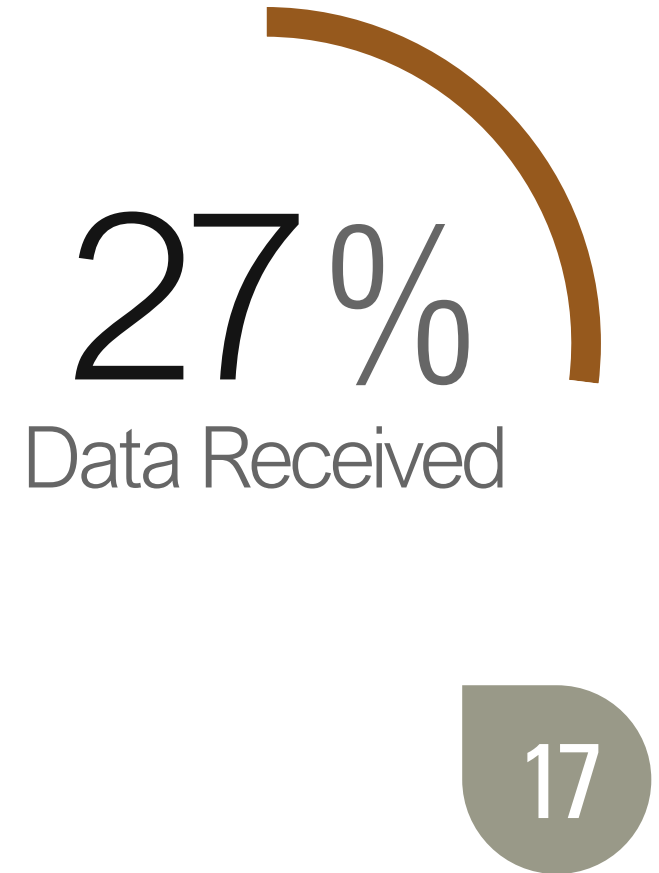
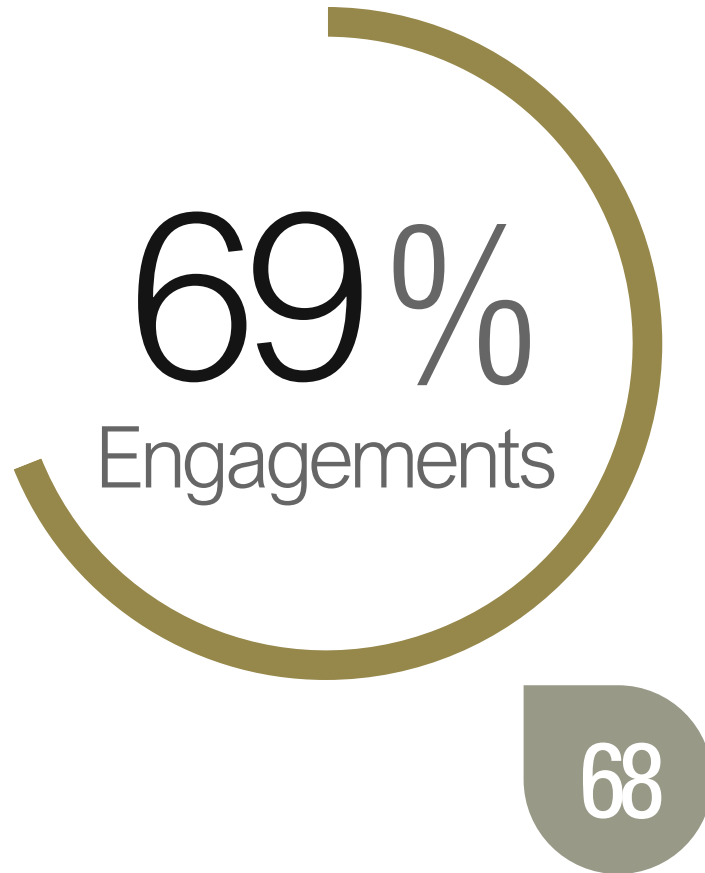
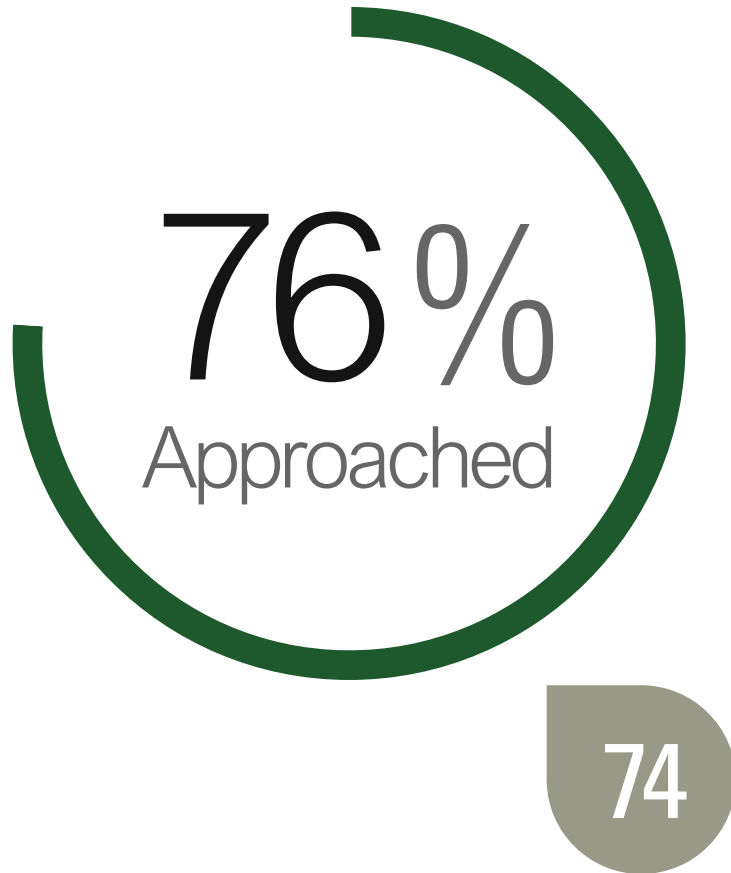
@ 25 January 2019

### Data Collected:

— METROPOL		<b>8</b>
— DISTRICT		<b>36</b>
— LOCAL		<b>139</b>
— TOTAL		<b>183</b>



# STATE INSTITUTIONS // DASHBOARD (98)

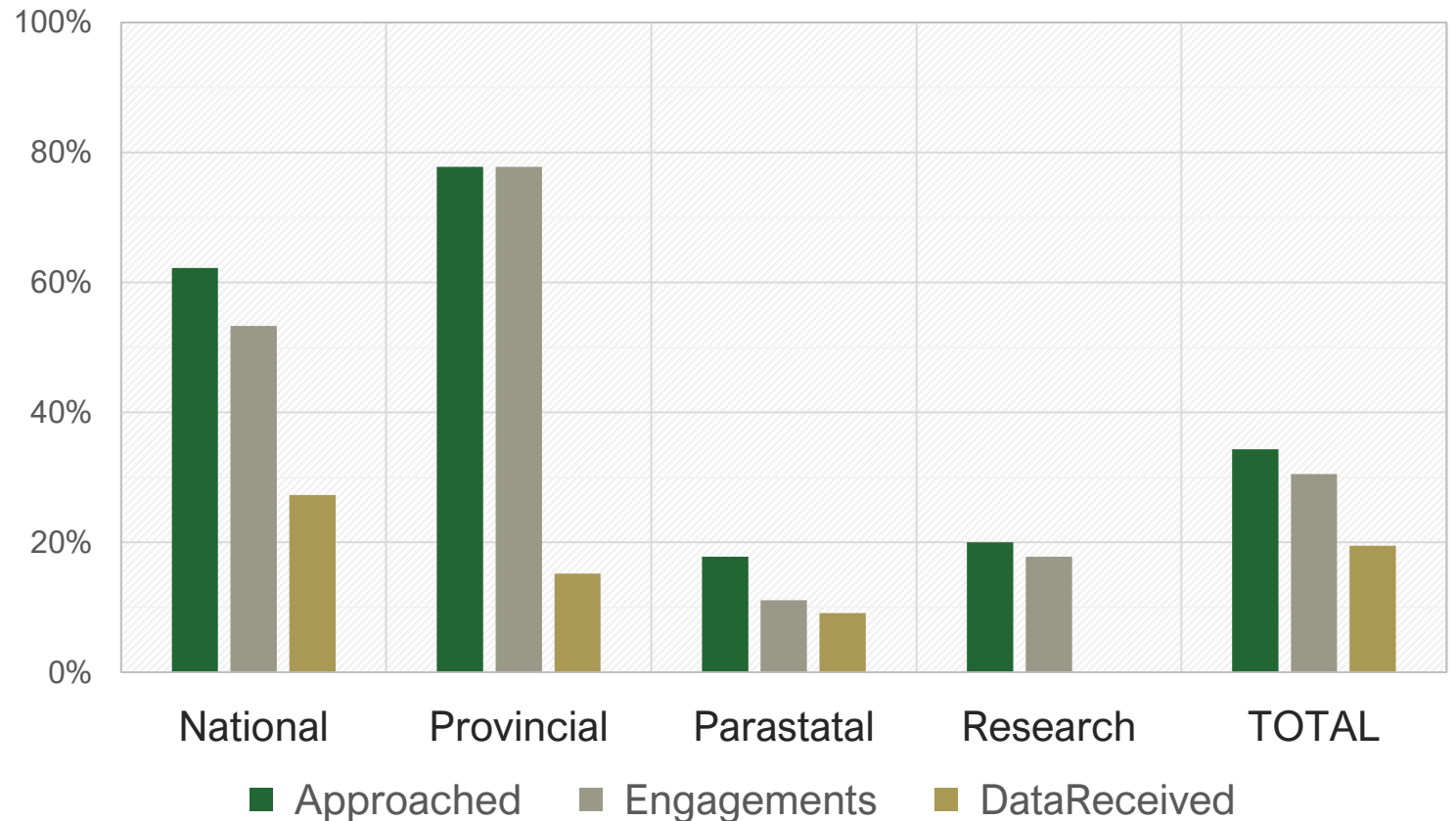


# STATE INSTITUTIONS // BY CATEGORY (%)

## REPORT INFORMATION

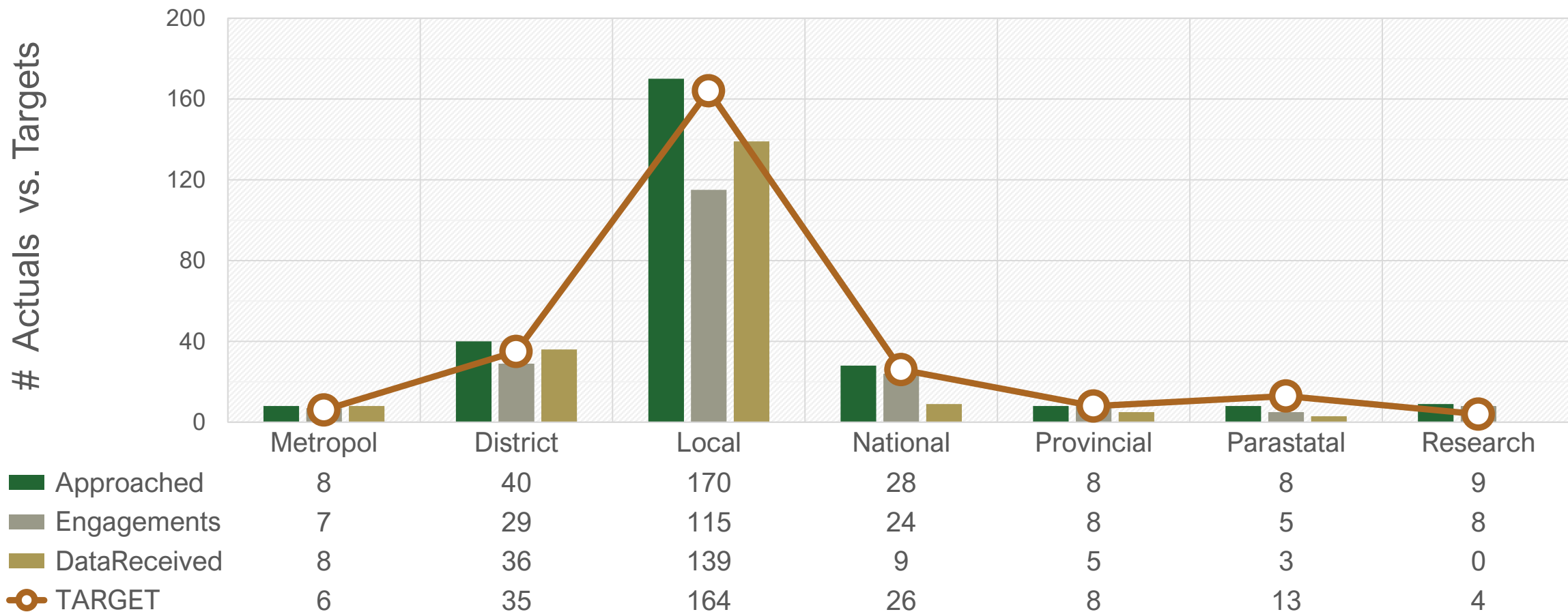
@ 25 January 2019

- *NOTE: ± 77* out of **98** state institutions actually have spatial planning data that can (*potentially*) be collected.
- The remaining stakeholders are engaged on the basis of creating “*awareness*” only.



# NSPDR > ONBOARDING

## PERFORMANCE // ACTUALS V. TARGETS



# Technical Solutions



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA



# NSPDR > TECHNICAL SOLUTION UPDATE // PART-ONE

## ✓ completed

- Portal development completed:
  - Search functionality; e-learning; reporting issues (citizen crowd sourcing); data inventory; SPLUMA compliance sample dashboard;
  - Exploring data by theme; analysis tools; data custodian/contributor links; and the disclaimer.
- The DRDLR has approved the Portal landing page and overall design.
- E-Lodgement and Portal have completed UAT sign-off.

## ✗ outstanding

- OCIO to confirm hosted environment for the NSPDR Ecosystem. The “Go-live” date has been postponed.
- System and Data Administrators to be identified.
- SASDI EMC - minimum metadata available: compliance verification will be impacted.
- Security to be customised and finalised by the DRDLR ICT team prior to “Go-Live”.
- User management support to be completed.
- Updated E-Learning link.



# NSPDR > TECHNICAL SOLUTION UPDATE // PART-TWO

## + successes

- E-Lodgement and Portal have completed UAT sign-off.
- Ongoing scheduled stakeholder engagement with data custodians.
  - Data received uploaded into the system.
  - Municipal data received has been loaded into the SDF database.
  - A geodatabase template is available for the gathering of municipal data.

## — challenges

- Resource constraints for cataloguing of municipal data speedily so that it is ready to be uploaded to the system; Town planning system experience will be impacted; Lack of SDF data and metadata; M&E hampered by lack of data (dashboards).
- Data quality issues will hamper the experience of using the NSPDR Ecosystem portal. Currently under review.





## Functional

### A web-based GIS

- Tablet and compatible mobile devices

### An offline appliance

Provide for real-time access and data synchronisation across NSPDR

Spatial and attribute querying and search functionality

Provide the ability to link with external databases of the various stakeholders

**Administrative functionality to align attributes from different databases, facilitate sharing of core datasets and prevent unnecessary data duplication**

Secured access control

Administrative functionality to review and authorize changes to master data through versioning

Data quality and integrity management

**Monitoring and Evaluation mechanism to ensure compliance as specified in SPLUMA (Act 6 of 2013) and its Regulations**

Generate performance reports on integrated planning and information sharing from the NSPDR Ecosystem

Data custodian management function aligned to the South African Spatial Data Infrastructure Act

Enable horizontal and vertical alignment of spatial plans (Rural Development Plans, Spatial Development Frameworks, sector plans etc.)

**Lodging of development applications through the NSPDR Ecosystem**

Create a web based application workflow to enable the ability to electronically submit a Land application which is in compliance with Section 35 of the SPLUMA Regulations (published in the Government Gazette No. 38594 of 23 March 2015) provides for “electronic submissions”

**Automated and user customizable reporting functionality including spatial information (maps), data tables, graphs, documents, images and text files**

API & Seed Apps that will be part of the NSPDR Ecosystem

**Non-functional requirements:**

A Data Storage that contains the Base Data and Municipal Data.

**Linking to the national Metadata Catalogue – a vital tool for management of spatial data**

A link to the SASDI EMC for metadata management

**App Space: The data and API through the NSPDR infrastructure should enable the development of business-specific applications**

An NSPDR Appliance that will host the applications and viewer as part of the main infrastructure.

**An offline appliance in the form of Data-in-a-box will be made available upon request**

Allow for optimal performance in very low-bandwidth scenarios, as well as functional speed during simultaneous access by multiple users with moderate Internet access and bandwidth.

**Data security through secured access and encryption according to State Security Protocol and ICT Policy**

Audit trails on changed, edited and added spatial and attribute information

**Ability to make use of open source tools**

Adherence to open standards for the development of the NSPDR Ecosystem (e.g. OGC).

Provide training manuals and marketing materials for the NSPDR Ecosystem.

**Post Implementation Support**

Post implementation support will include bug fixes, streamlining processes, updates and technical maintenance for a two-year contract period.

# NSPDR > USER TESTING

## UAT // SATISFACTION LEVELS

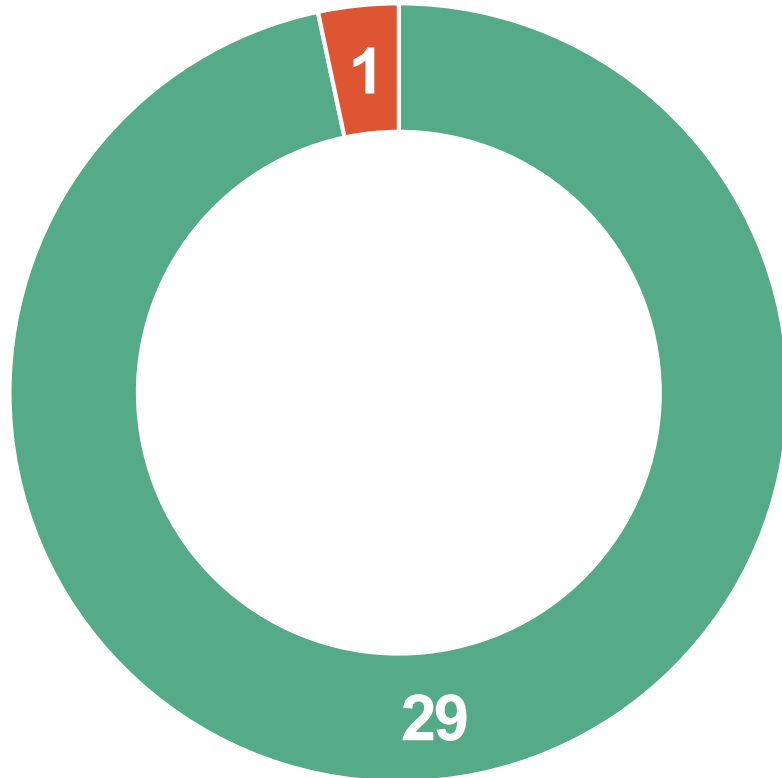
#	PARTICIPANT	REPRESENTING	NSPDR	E-LODGEMENT
01	<b>Paul Strydom</b>	DRDLR	8.5	8.5
02	<b>Norman Rakhumba</b>	DRDLR	8.5	8.5
03	<b>Rendani Mudau</b>	DRDLR	8.5	8.5
04	<b>Walter Smit</b>	SPLUM – Western Cape	9	9
05	<b>Emmanuel Jeje</b>	SPLUM – Western Cape	9	9
06	<b>Tukisetso Kopela</b>	DRDLR	8.5	8.5
07	<b>Nomfundo Kweyama</b>	SPLUM – KwaZulu-Natal	9	#N/A
08	<b>Hlonela Mntonintshi</b>	SPLUM – Mpumalanga	7	#N/A
09	<b>Ross Hoole</b>	SPLUM – KwaZulu-Natal	5	5
10	<b>Afikile Mtwana</b>	SPLUM – Eastern Cape	7	6
11	<b>Gerhardus De Bruin</b>	SPLUM – Northern Cape	#N/A	6
12	<b>Dave Moffett</b>	SPLUM – Mpumalanga	#N/A	5



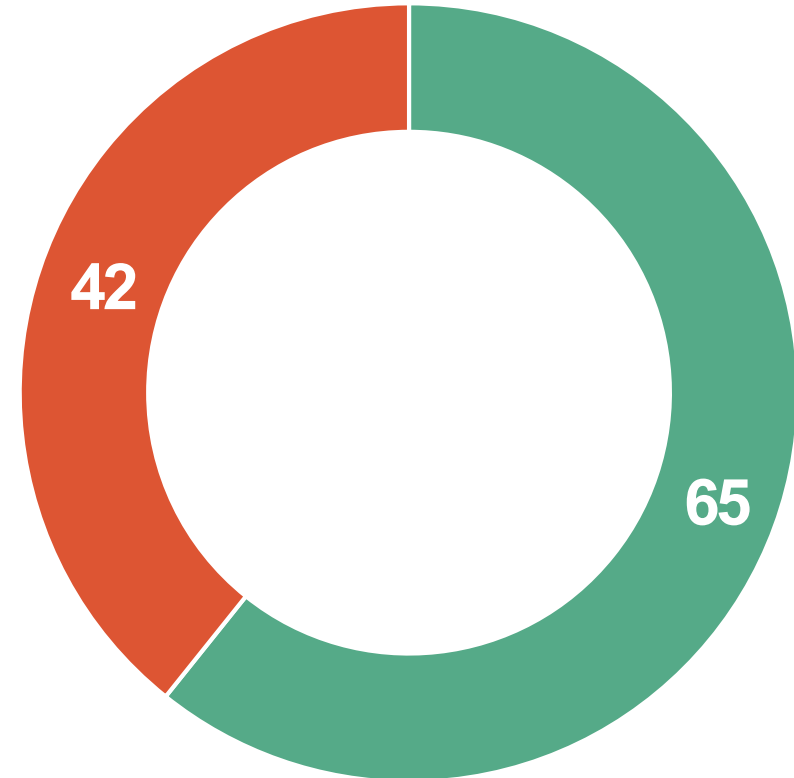
NSPDR > USER TESTING

# SYSTEM TESTING // OPEN VS. CLOSED (#)

## E-Lodgement ...



## Data Repository ...



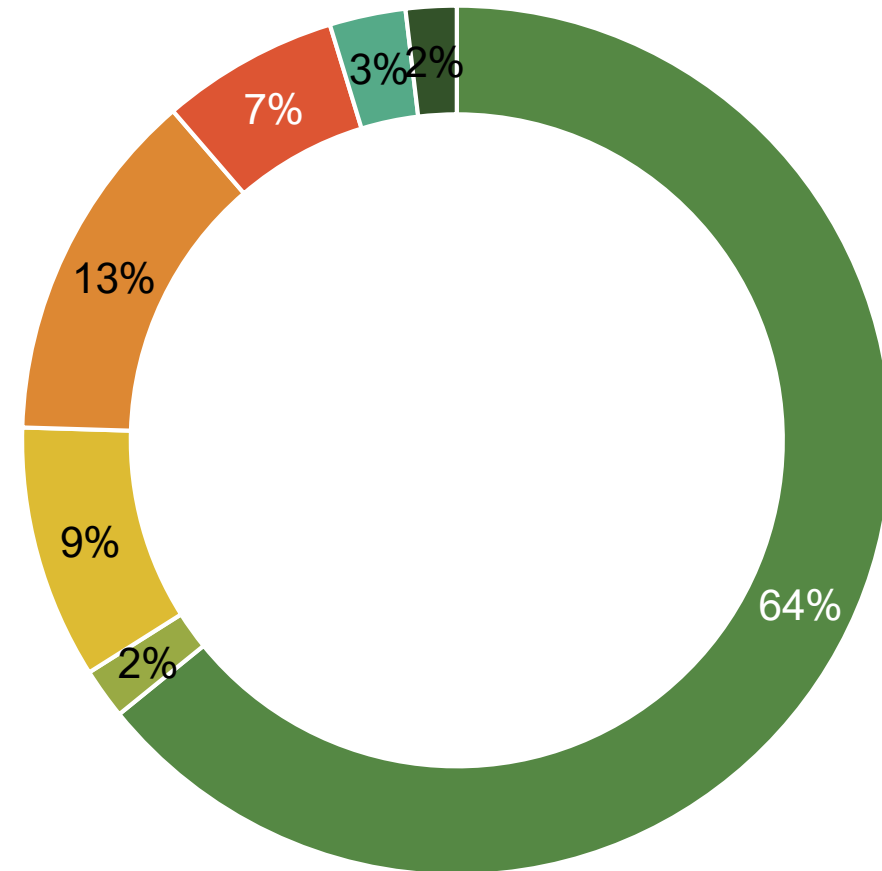
■ OPEN  
■ Closed



# NSPDR > USER TESTING

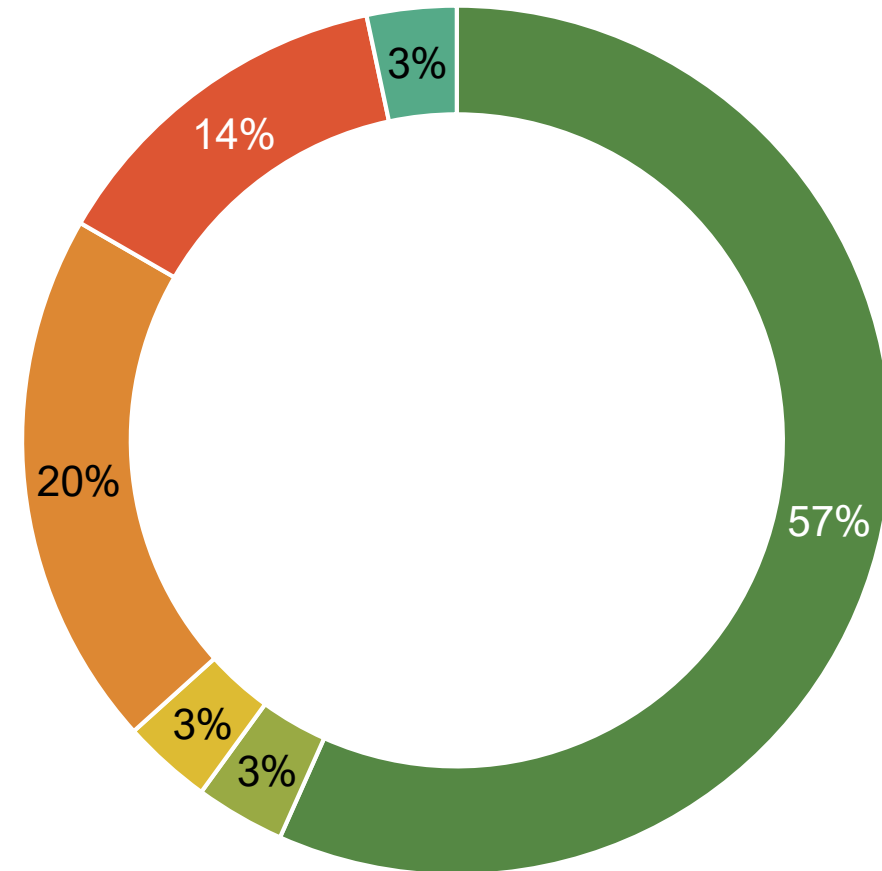
## NSPDR ECOSYSTEM // BY TYPE

- Functionality
- Enhancement
- User Interface
- User Query
- Spelling Error
- User Network Restrictions
- Misinterpretation of Instructions



# NSPDR > USER TESTING E-LODGEMENT // BY CATEGORY

- Functionality
- Cloud Issue
- User Query
- Enhancement
- User Interface
- Data Error



# Support & Training



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA





# PROOF OF CONCEPT // E-LODGEMENT

## LESEDI LOCAL MUNICIPALITY

An official request to pilot the E-Lodgement application has been received from Lesedi Local Municipality.

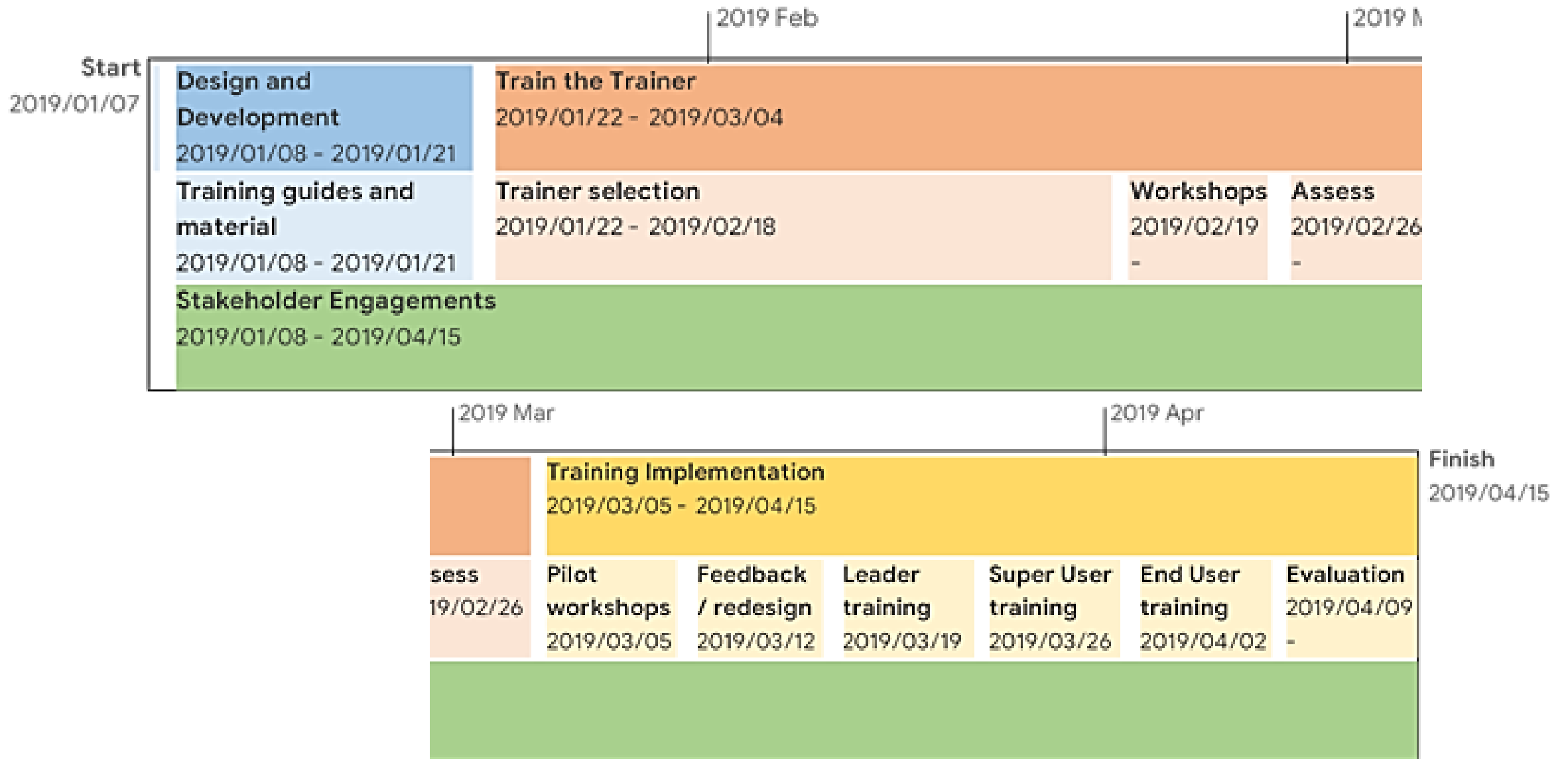
- The project team will support the proof of concept/pilot during the month of January 2019.
- The main purpose of this POC is to prove and confirm the NSPDR E-Lodgement application's viability.
- A proof of concept provides municipal staff with experience in using this new technology and, barring a poor evaluation, will result in approval to go ahead with full implementation.

## SUPPORT PHASE // TRAIN THE TRAINER

- As a large number of trainees need to go through the training program the most economical way would be a **train the trainer** approach.
- The trainers will be **identified by the organisation** and the train the trainer sessions will provide an opportunity to **assess their suitability**.
- It is suggested that the trainers be Subject Matter Experts on the system in order to effectively deliver the technical training.
- As previously stated in the *Training Needs Analysis Report* the **regional champions** identified could fulfil this role.
- The train the trainer sessions will **comprehensively cover the course curriculum**, learning outcomes, method of delivery, and assessment procedures.

## SUPPORT PHASE // TRAIN THE TRAINER

- It is envisaged that Agizo/Esri SA resources will be responsible for delivery of the **first iteration** of training as per an agreed scope of work to identified client resources who in turn will become trainers.
- Train the trainers would be the most efficient strategy to enable the team to reach the provincial and municipality users.
- The client project team under the direction and guidance of Agizo/Esri SA resources will do the **second iteration**.
- The client team should then be in a position to complete the **third and future iterations** without the help from Agizo/Esri SA resources.
- Agizo/Esri SA resources will however conduct quality assurance on all training deliverables.



# WORK PLANNED // NEXT 90 DAYS (*STARTING FEB 2019*)

## TECHNICAL SOLUTION

- NSPDR E-Lodgement – Proof of Concept (Lesedi and others)
- Ongoing spatial data cataloguing and uploads

## CHANGE MANAGEMENT

- Ongoing municipal and stakeholder engagements
- Design and implement the “Train the Trainer” programme

# ACTIVITY ROADMAP // ONGOING & UPCOMING

*Continue to  
Engage and  
Onboard  
stakeholders*

**UAT Signoff,  
Sys-Admin  
Training,  
E-Learning**

**Migrate from  
Staging to  
Production  
Environment**

**Marketing  
Campaign to  
maximise  
custodian  
participation**

**Post-  
Development  
Maintenance,  
Support and  
Training**



# 5 Issues log ...



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA







# rural development & land reform

---

Department:  
Rural Development and Land Reform  
**REPUBLIC OF SOUTH AFRICA**

# thank you