Remote Roads Condition Auditing and Monitoring

**Project Outline**

# Scope of auditing and monitoring

## Road safety

* Road markings and road studs
* Barriers
* Signage
* Traffic controls
* Street lighting
* Crime hotspots
* Speed monitoring
* Drainage
* Surface condition
* Verges

## Functionality

* Congestion / volumes
* Interfaces
  + Taxi / Bus stops
  + Pedestrians
  + Animals
* High accident zones

## Environmental

* Litter

# Evidence

## Drone technology

* Images
* Videos

## Embedded technology

* Universities
* CSIR
* Roads Departments

## Crowd sourcing

* Images
* Videos
* Text reports
* Inspections

## Existing data

* SANRAL
* Provincial Roads Depts
* Municipalities

# Organisation

## Coordination

### Project management

* + Sub-team coordination
  + Skills sourcing
  + Programming and time management

### Financial management

* + Funding applications
  + Funding reporting and feedback
  + Budget management

### Document management

## Civil Engineering

* Condition assessment methodologies
* Design and operation guidance

## IT

* Online data collection portal
* Mobile Apps
* Data hosting and security
* Input validation (spam, image quality, etc.)
* Sensor data processing
* Image processing and analysis
* Reporting

## Communications

* Stakeholder engagement
* Publicity
* Team feedback and updates

## Legal

* Privacy (images and videos)
* Liability and legacy
* Sub-team / consortium / partnership agreements
* Donor agreements
* Copyright and licencing

## Stakeholder organisations

* Move One Million
  + Crowd sourcing
* SANRAL
  + Current data
* Provincial Roads Departments
  + Current data
* CSIR
  + Up-scaling support
* UKZN
  + Research programmes
  + Academic skills
* UCT
  + Research programmes
  + Academic skills
* UOFS
  + Research programmes
  + Academic skills
* Google
  + Server / Data Hosting
  + Traffic data
  + Street view images
* Open Street Maps
  + Underlying mapping
* Tracker
  + Usage and crime data
* Open Data Organisations
  + Open Knowledge Foundation
  + Open Africa
  + Open Street Maps
* World Bank Group
  + Project funding
  + Infrastructure investment programmes
  + Scaling to Developing Countries
  + Road Network Evaluations Tools (RONET)
* African Development Bank
  + Project funding
  + Infrastructure investment programmes
  + Scaling to Developing Countries
* Professional Bodies
  + South African Institution of Civil Engineering
  + Consulting Engineers South Africa
* SA Police Services
  + Current data
  + Crowd sourcing
* Metro Police Services
  + Current data
  + Crowd sourcing
* Road Freight Association
  + Current data
  + Crowd sourcing
* SA Association of Freight Forwarders
  + Current data
  + Crowd sourcing
* Larger Municipalities / Metropolitans
  + Current data
  + Crowd sourcing
* South Africa National Taxi Council
  + Crowd sourcing
* Local Taxi Associations
  + Crowd sourcing
* Interested individuals

**Change Control:**

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| --- | --- | --- |
| Revision No. | Date | Author |
| 0.0 | 8th June 2021 | Neil Oliver |
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