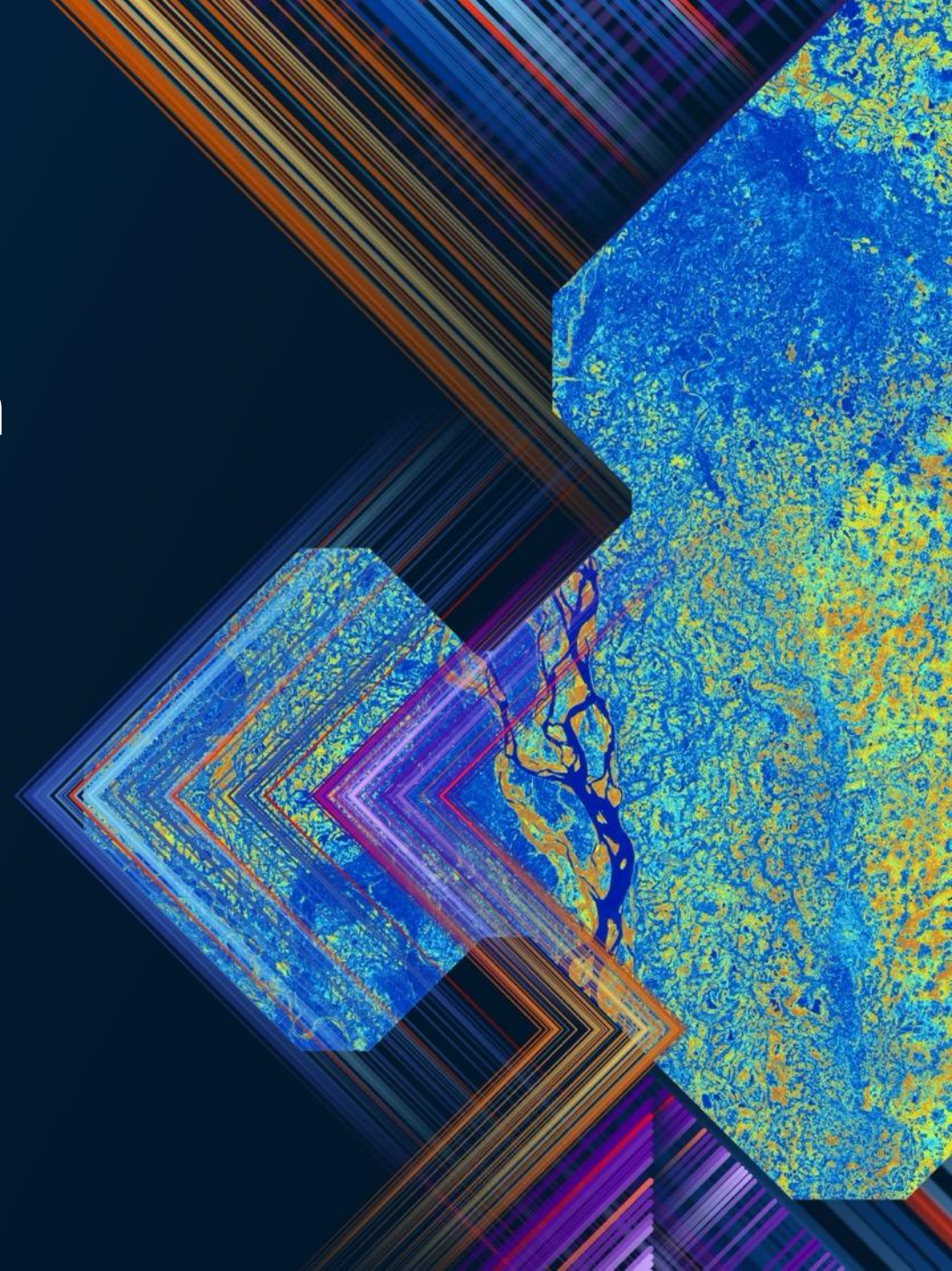


# Spatial Asset Capture Solution

André Cloete



*SOUTHERN AFRICA ESRI USER CONFERENCE 2025*



# Overview

- Spatial Asset Capturing System (SACS)
  - SACS was developed by Asset Specialists and Esri South Africa to assist local authorities to:
    - Capture New Assets
    - Edit Existing Assets
    - Unbundle and Monitor all assets in a reliable spatial platform.
  - The system contains all relevant **Financial** and **Technical** information.

# Positioning – Why SACS?

## Engage with Municipalities Daily

- Address daily challenges
- Pinpoint shortcomings and needs
- Analyze tools used by municipal officials
  - Excel (local)
  - Kml
  - Shapefiles



## Address Key Issues

- Target shortcomings
- Develop solutions with spatial components
- Utilize expertise and user-friendly software to deliver client solutions



## Leverage Existing Resources

- Existing knowledge and software
- Clients already have our software
- Built-in expertise



## Accessible Implementation

- Low code no code solutions
- Easy to implement



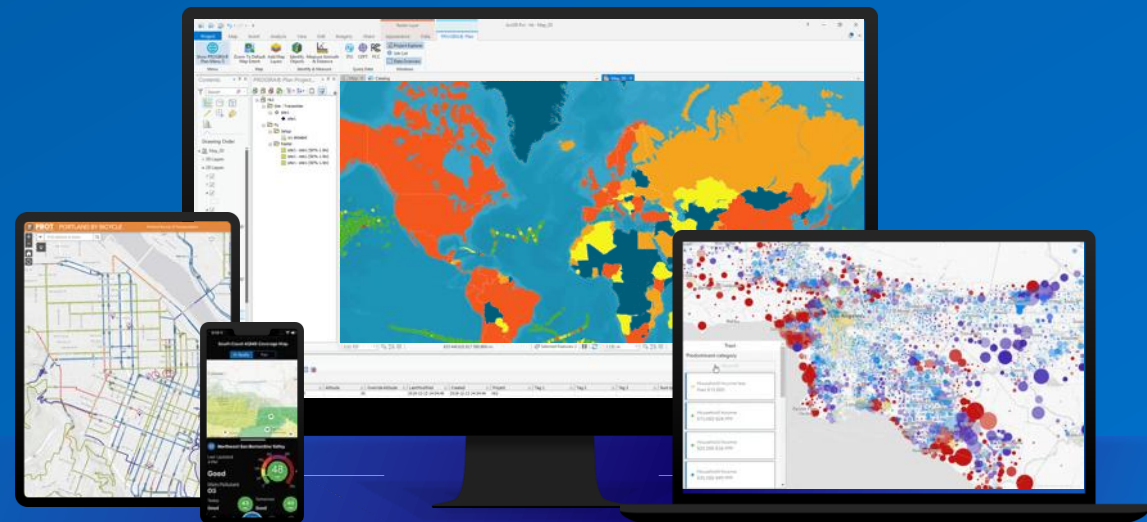


# Main Functions



# Web Based

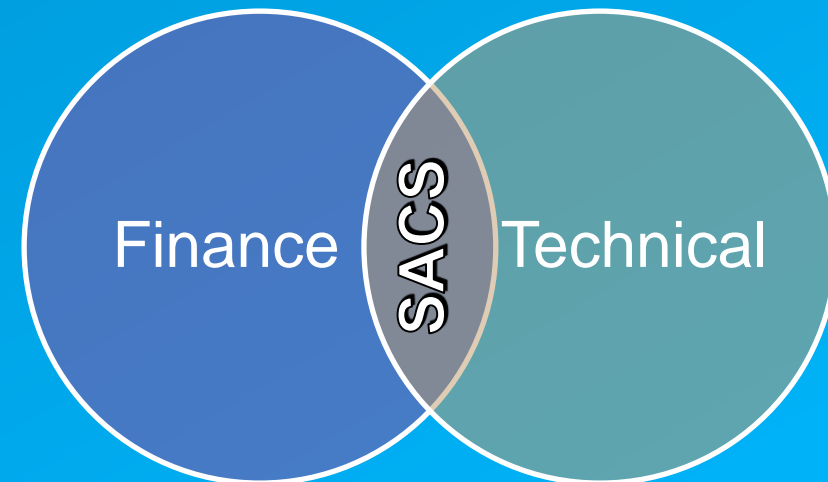
- Access anywhere, anytime through a browser
- No installation or heavy IT setup required
- Centralized platform for all municipal users
- Enables remote data capture and editing





# Merging of Financial and Technical Schemas

- Unified Financial and Technical View (GRAP 17 Compliant)
- Combines financial and technical asset data in one system
- Aligns directly with GRAP 17 requirements for asset location and valuation
- Provides a single source of truth for both engineers and finance teams
- Supports budgeting, maintenance, audits & depreciation tracking
- Enables transparent reporting and accountability



# Automatic Enforcement of Compliance

03

- GRAP 17 (Generally Recognised Accounting Practice 17) sets out the standards for accounting and reporting on Property, Plant, and Equipment (PPE) for public entities and municipalities.
- It requires that each asset must have:
  - A unique identifier
  - A spatial location (where it physically exists)
  - A verified financial value and useful life
  - Proper classification and depreciation tracking
- Mandatory fields (MSCOA)
  - Reduces human error
  - Ensures data consistency across all assets



# Flexible Design

- Schema can be published directly from Excel
- Automated workflows simplify data entry
- Adapts to different municipal needs
- Supports scalable deployments

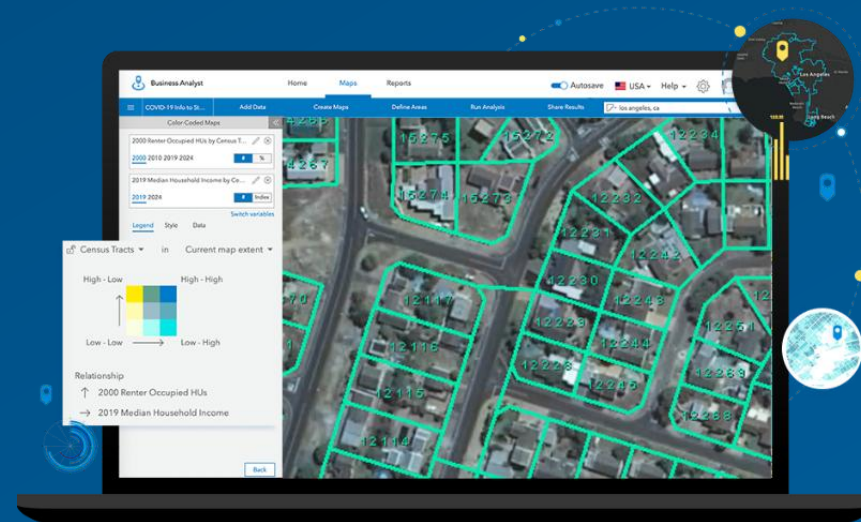




# Instant Reporting and Monitoring

## Live Asset Register and Real-Time Insights

- Instant dashboards and summary reports
- Always up-to-date data view
- Supports performance monitoring and audits



# Reliable Performance

Reliable, Consistent, and Secure

- Built on ArcGIS Online
- High uptime and scalability



# Zero Duplication

- Prevents redundant entries
- Improves efficiency and data quality
- Simplifies auditing and reporting





# Asset Hierarchy

- Implements CIDMS principles directly within a spatial environment
- Uses the CIDMS asset hierarchy and data standards to ensure national consistency
- Embeds best-practice processes and relationships for infrastructure management



<https://cidms.co.za/>

▼ Accounting Group (Level 1) ☑

is any of

0 Selected

Search

☐ Heritage Assets

☐ Intangible assets

☐ Inventory

☐ Investment property

☐ Living Resources

☒ Property, plant and equipment

Asset Group (Level 4) ☑

is any of

0 Selected

Asset Type (Level 5) ☑

is any of

0 Selected

Asset Component (Level 6) ☑

is any of

0 Selected

DEMOS



# Spatial Asset Capturing System

[Home](#) [Asset Register](#) [Asset Monitoring](#) [Auditing & Reporting](#) [Verification & Inspections](#) [Project Management](#)

Streamline your operations with the power of a **Spatial Asset Capturing System**

Streamlining Choices, *Creating an Impact*

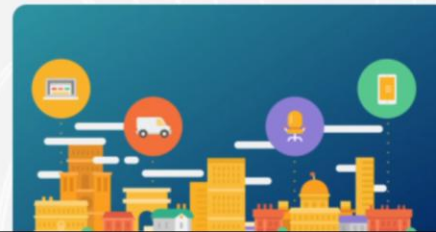
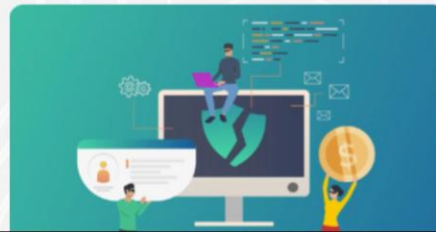


SACS was developed by Abrie Fourie (Asset Specialist) and Esri South Africa to assist local authorities with capturing, unbundling and monitoring of all assets in a reliable spatial platform.

The system contains all relevant Financial and Technical information.

## Capture Assets

Use the links below to access the web application for capturing assets with relevant technical and financial information.







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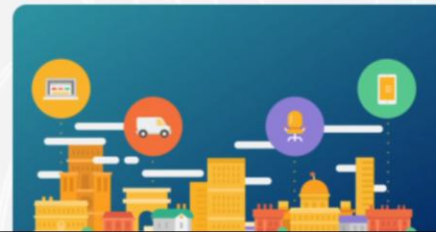
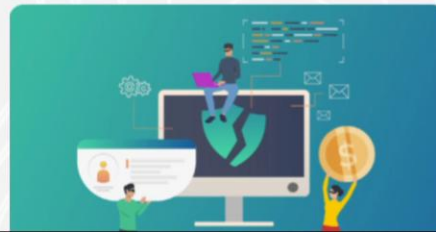


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Use the links below to access the web application for capturing assets with relevant technical and financial information.





## Select appropriate asset to start capturing

## Community Facilities

## Electricity

Line - ACSR AI

Line - ABC - AI

Line - AAAC

## Water

Line - 66kV

## Solid Waste Disposal

Cable - PILC

Cable - XLPE

Cable - Interdac

## Network &amp; Communication

Cable - PVC-SWA

## General Assets

## Substation

## Land &amp; Buildings

Switching Station - HV

Substation - MV

Substation - HV

## Plant &amp; Equipment

Mini Substation - With RMU

Mini Substation - Without RMU

## Heritage &amp; Intangible Assets

Ring Main Unit - 2 Way

Ring Main Unit - 3 Way

Ring Main Unit - 4 Way

## Office Equipment

Kiosk - Traffic Light Control Box

Kiosk - Street Light

Kiosk - Service Kiosk

## Roads &amp; Stormwater

Kiosk - Meter Box

Kiosk - Main Distribution Box

Kiosk - Stubby

## Other Assets

Transformer - Ground Mounted

Transformer - Pole Mounted

Pole

## Sanitation

Street Light

Light

Consumer Connection Point

Bus Bar - Single (Switchgear)

Pillar Box

Metering Unit (Voltage Transformer)

Bus Coupler Protection Panel

Incomer Panel

Auto Recloser

Capacitor - On Line (11kV)

Batteries

Resistor - Natural Earthing

Inverter

Solar Panel

Battery Tripping Unit

Power Plant

Generator

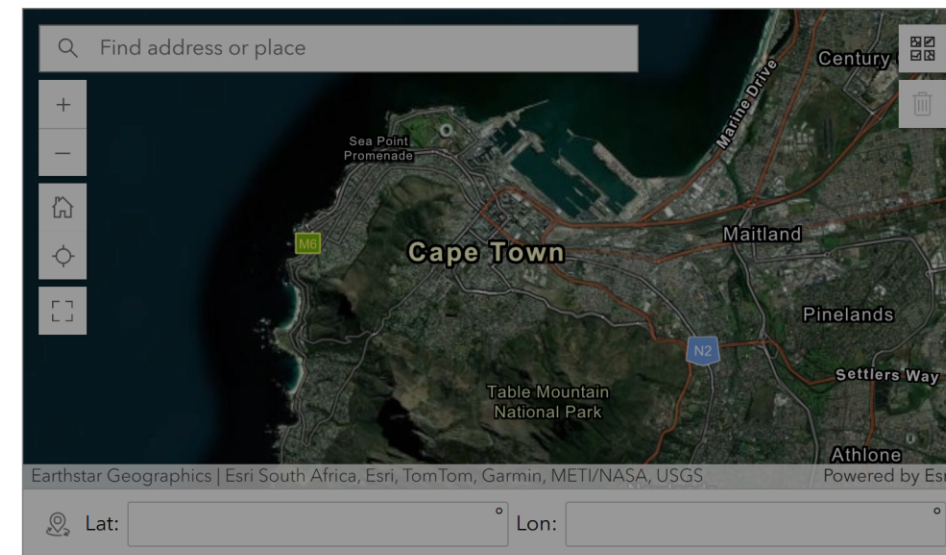
Wind Turbine

Circuit Breaker - Outdoor

## Light

## Asset Location\*

Click on the map to place a point.



Next

Page 1 of 3





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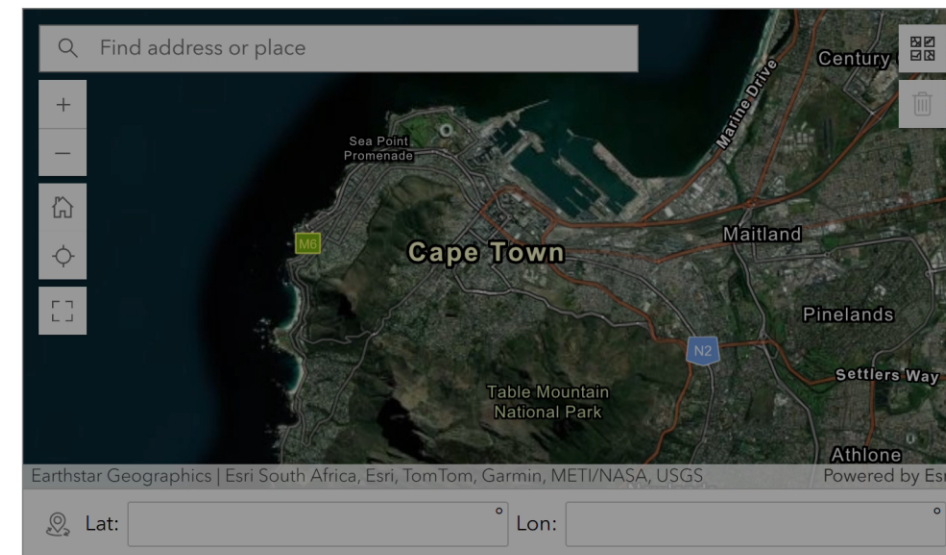
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	Status ◆ ...	ConsultantPsp ◆ ...	DataSource ◆ ...	Condition ◆ ...	AccountingGroup ◆ ...	AccountingSubGr... ◆ ...	AssetClass ▲
	Replacement	Cactus Asset Managment	CAD	3 - Fair	Property, plant and equip...		
	Existing	Cactus Asset Managment	As-Built	1 - Very Good	Property, plant and equip...		
	New	Cactus Asset Managment	As-Built	3 - Fair	Property, plant and equip...		
	New	Cactus Asset Managment	As-Built	1 - Very Good	Property, plant and equip...		
	New	Cactus Asset Managment	As-Built	2 - Good	Property, plant and equip...		
	New	Cactus Asset Managment	As-Built	1 - Very Good	Property, plant and equip...		
	New	Cactus Asset Managment	As-Built	1 - Very Good	Property, plant and equip...		
	Existing	Cactus Asset Managment	As-Built	1 - Very Good	Property, plant and equip...		
	Existing	Cactus Asset Managment	As-Built	2 - Good	Property, plant and equip...		
	New	Cactus Asset Managment	CAD	2 - Good	Property, plant and equip...		
	Existing	Cactus Asset Managment	Services Plan	2 - Good	Property, plant and equip...		
	Existing	Cactus Asset Managment	As-Built	2 - Good	Property, plant and equip...		
	Existing	Cactus Asset Managment	CAD	1 - Very Good	Property, plant and equip...		

# Conclusion

- Self-service Asset Capture Solution Tool
- Fully customizable
- Fully compliant with municipal standards
- Ready-to-use, out-of-the-box solution
- Supplements Asset Management Solution (ERP)



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