



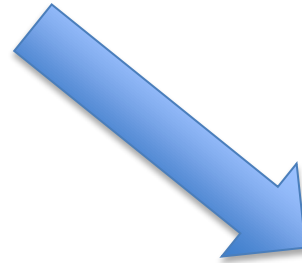
Rapid imagery analysis to guide crop management

Gert Conradie, Compass Informatics, South Africa



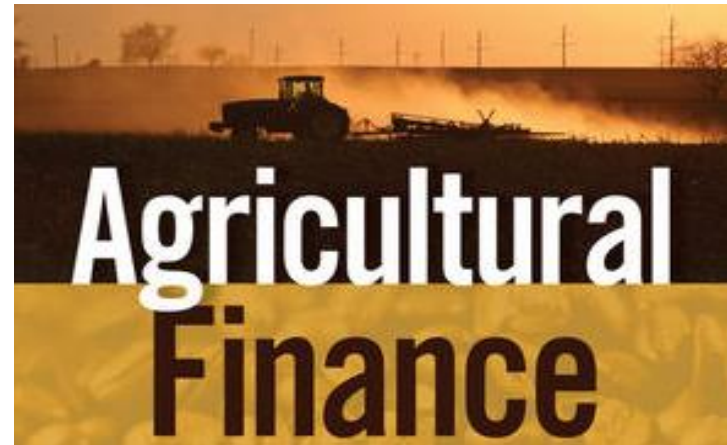
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Project Stakeholders



enterprisEvolution.

Target Market



Dataset Components (Raster)

- Weekly Dataset Components
 - Actual Evapotranspiration (mm/week)
 - Actual biomass production (kg/ha/week)
 - Leaf Area Index
 - Precipitation (mm/week)
- Daily Dataset Components
 - Minimum air temperature (C)
 - Maximum air temperature (C)
- Received as
 - 18 files per week
 - In 250m resolution

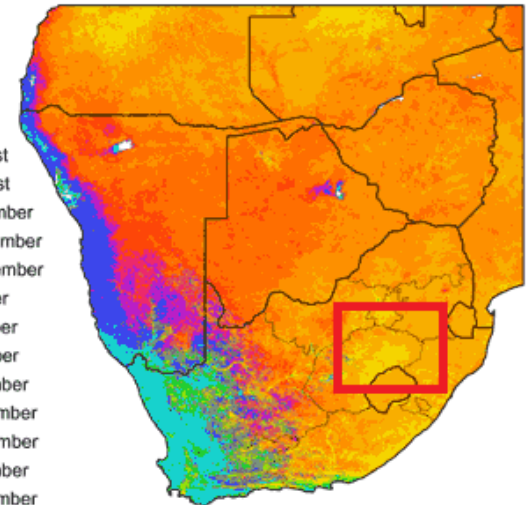
Agricultural Boundaries

- Mask for the summer rain fall area.
- Area > 10 ha
- Categorised as
 - Annual Crop Cultivation
 - Planted Pastures Rotation
 - Pivot Irrigation

Seasonal Timeline

- 2014 Growing season:
 - ISO W42 to ISO W22 (14 October 2013 – 26 May 2014)
- Project communication:
 - Received on 6 December 2013 (ISO W49)
- Market to clients in ISO W01
- Summer holiday in South Africa

Start Date of Growing Season
(Long Term Mean)

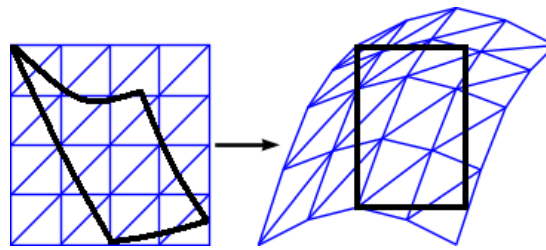
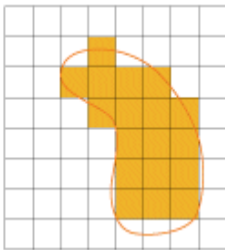
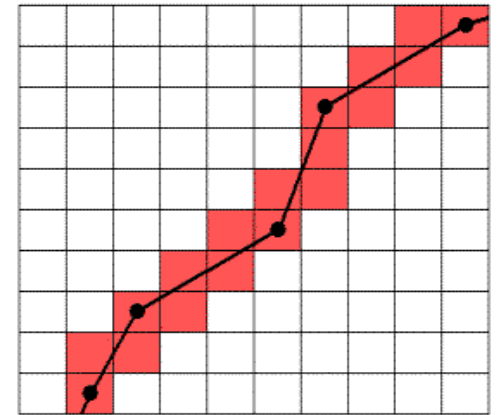


Weekly Timeline

- The weekly data acquisition cycle:
 - Monday to Sunday
- Data received:
 - The next Wednesday. (Delayed by two days)
- Process & release as quick as possible

Processing required

- Resample
- Re-projection
- Field intersection with raster
- Statistics & aggregation per field.
- Export to shp file
- aGoodle / Python / GDAL / SQL Server

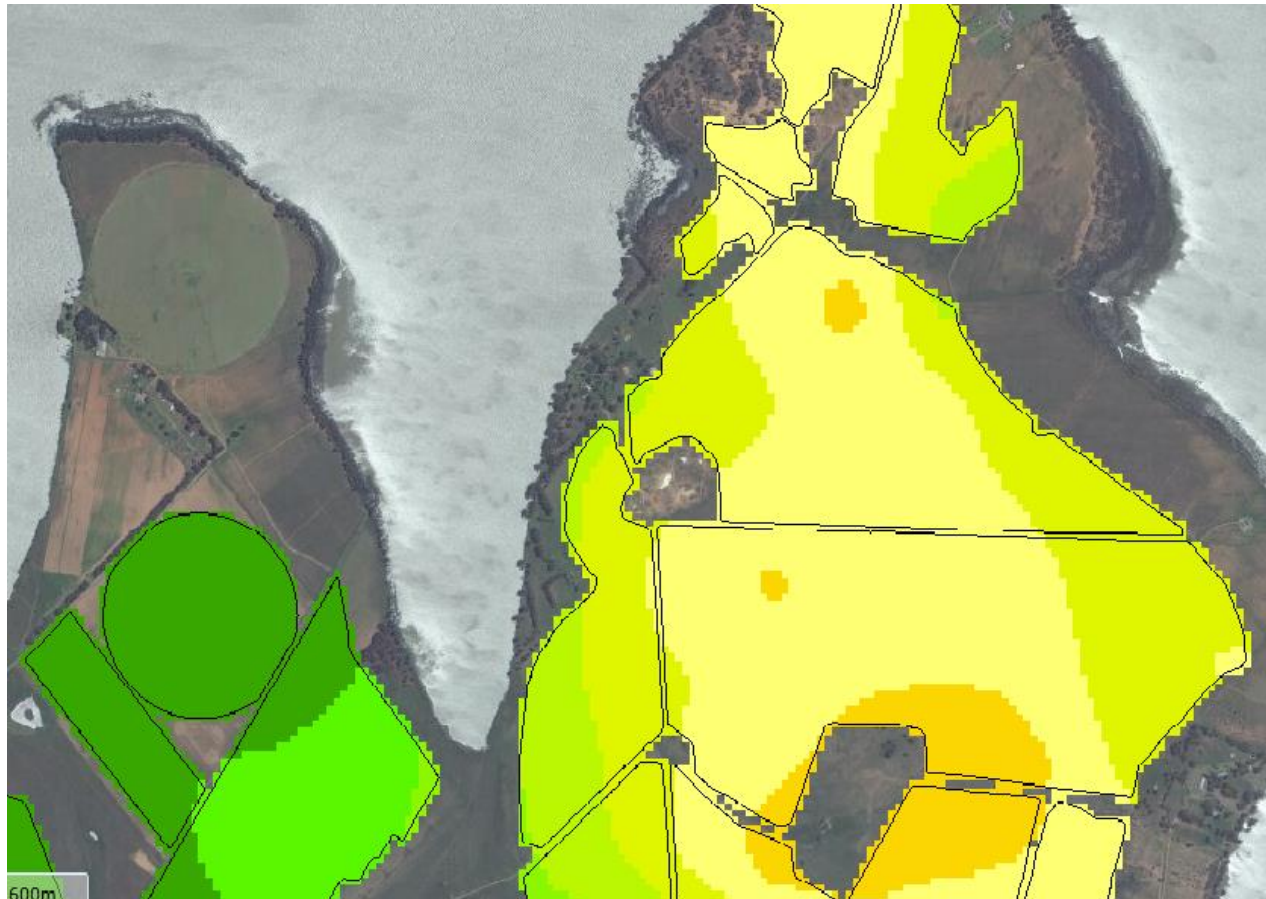


Microsoft
SQL Server

Operational Considerations

- Disk Space
 - 5GB/file
 - SQL Database
- Processing Time
 - 15 minutes / file
- Changing Field Boundaries

Output & Status





Questions



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