# Spotlight on Chenin blanc Research Data Warehouse

Hélène Nieuwoudt | Stevie Krynauw
Institute for Wine Biotechnology, Department of Viticulture and Oenology & Institute for Grape and Wine Sciences, Stellenbosch University, Stellenbosch

## Introduction

Chenin blanc wine has been in the research spotlight at Stellenbosch University in recent years. In the period 2010 - 2016 large volumes of data on the chemical and sensory profiles of commercial wines of the dry, off-dry, sweet and old-vine wines were generated. In addition, metadata pertaining to vineyard management and vinification practices were also collected. All this information is being captured in a purpose built data warehouse that can process queries and present information with powerful graphic visualisation tools.

## Objective

To process data sufficiently, effectively and with business intelligence in mind, for industry and research alike.

## Chenin research data (2010-2016)

Private cellars participating:~114
Sensory profiles determined: ~200 wines
Chemical profiles determined: ~300 wines
Publicly available sensory data analysed: 2,746 wines



Figure. Location of the ~114 private cellars that participated in the Chenin blanc research

## Data Warehouse



Researchers | Producers | Consultants

Industry Data Warehouse

Vitis Research Data Warehouse

Dept. of Agriculture Weather Data base

Chenin data is captured in the Vitis Research Data Warehouse

Other data collection institutions, *i.e.*:
• Research institutions
• Wine cellar laboratories
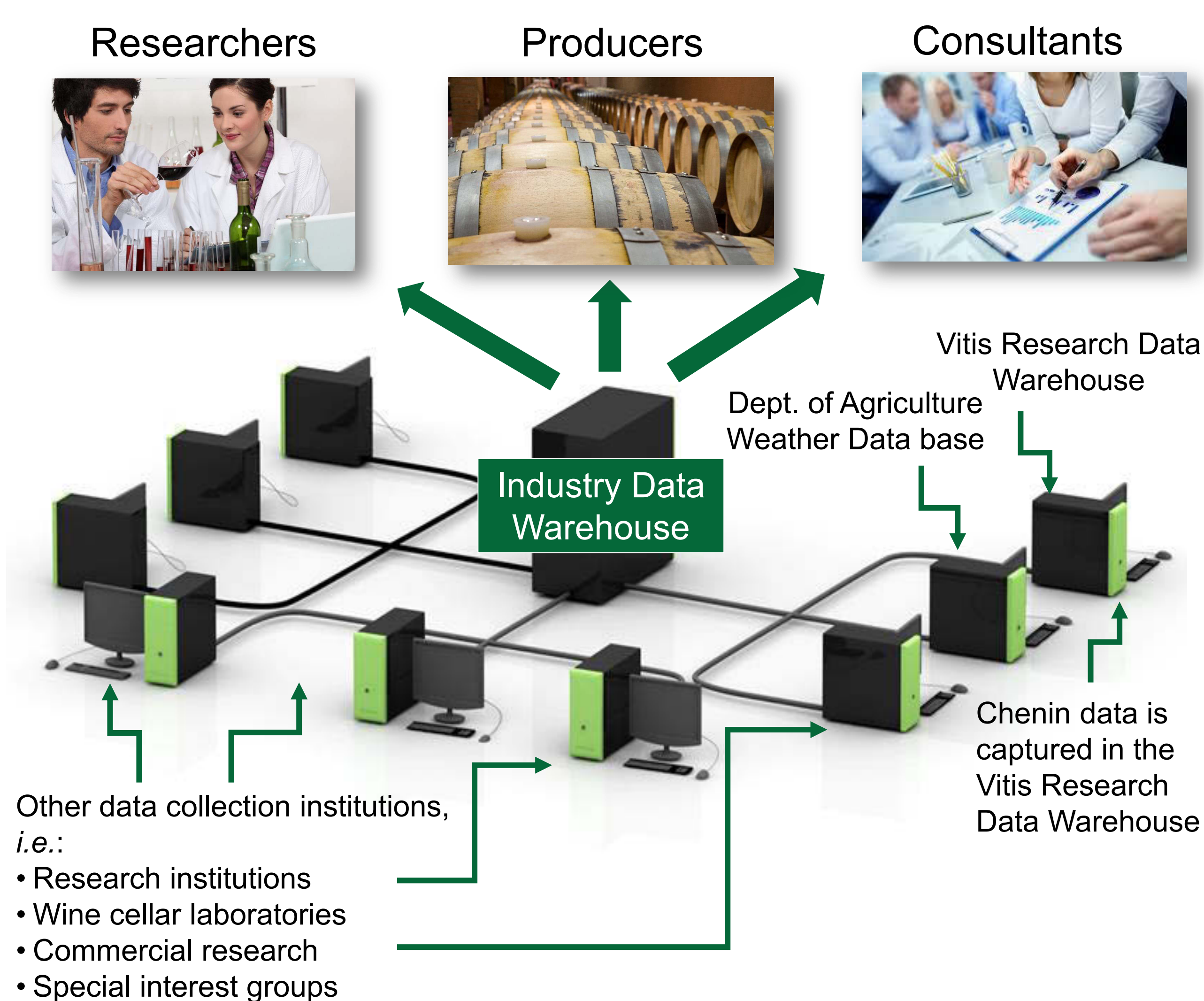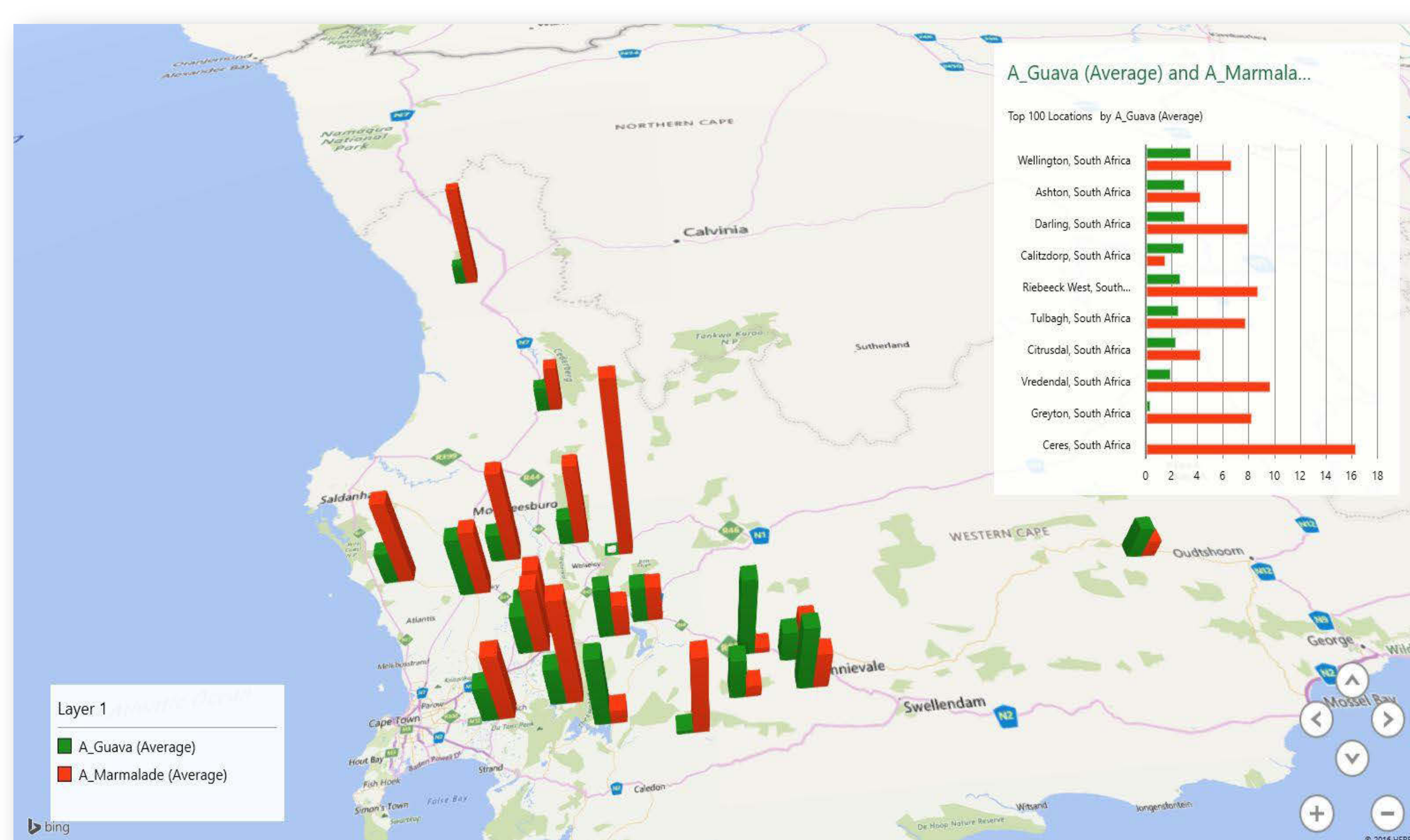• Commercial research
• Special interest groups

Figure. Data Warehouse built at Stellenbosch University

## Examples of queries and outputs

Query 1. What is the distribution of the sensory attributes *marmalade* and *guava* in Chenin blanc wines produced by SA cellars?



Query 2. What is the location of the old-vine Chenin wine producing SA cellars included to date in the research data warehouse?
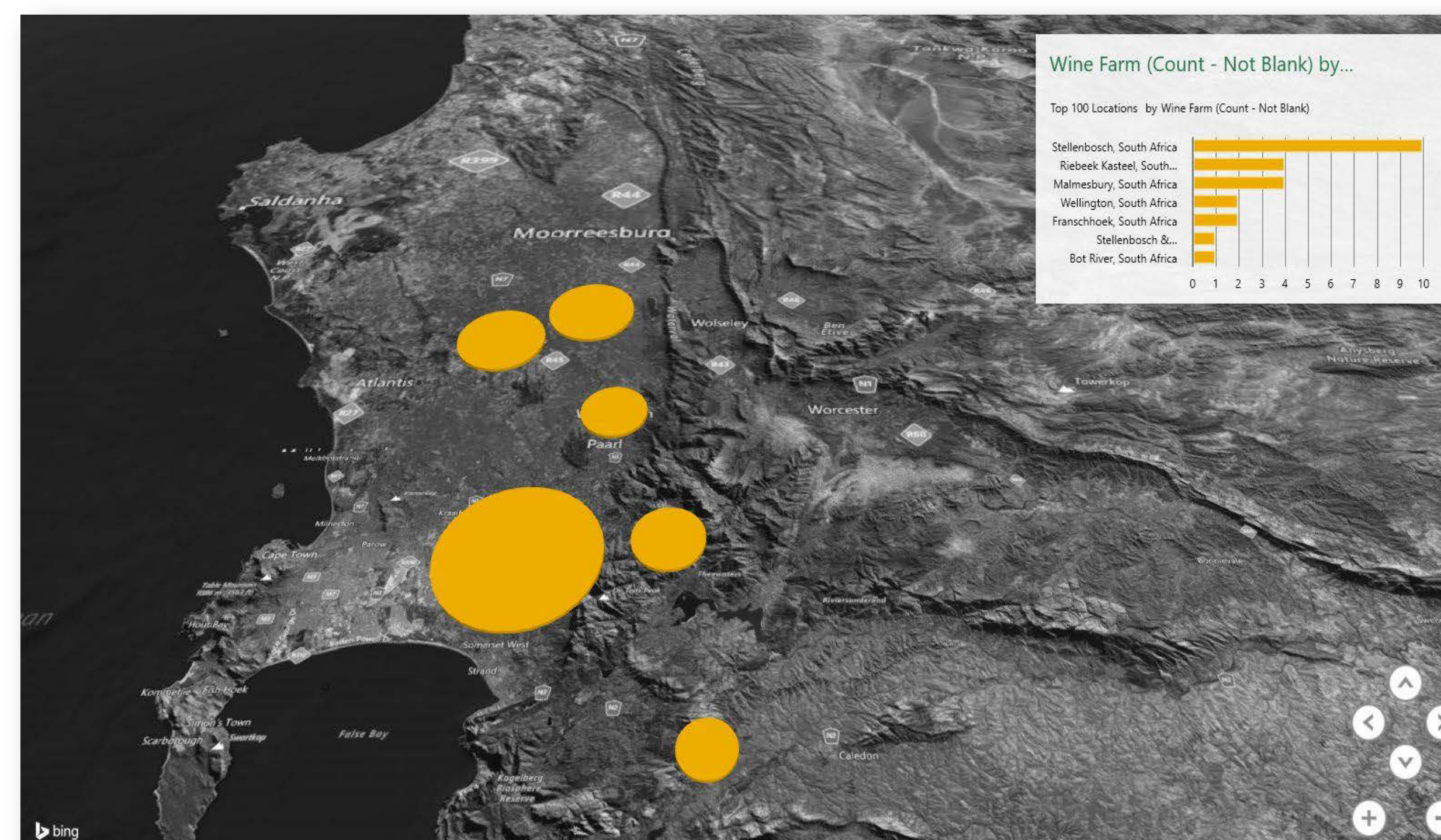


## Concluding remarks

As illustrated here by the Chenin blanc data, there is a significant amount of information that must be extracted from raw data, so that we can progress from **HINDSIGHT** (*i.e.* looking at historic data), to **INSIGHT** (understanding why we see the trends, patterns and observations that we do), to **FORESIGHT,** ( *i.e.* to predict the outcomes). To achieve this objective, weather data, wine cellar laboratories' data and data from commercial trials are needed to benefit all.