



# Step Beyond Spreadsheets

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# FAQ's

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- Can I get a copy of the slides? Yes, we'll email a PDF copy to you after the session has ended.
- Can we arrange a re-run for colleagues? Yes, just ask us.
- How can I ask questions? All lines are muted so please use Zoom's Q&A facility if we run out of time we will follow up with you.











- Premier accredited partner to IBM, Predictive
   Solutions and DataRobot specialising in advanced analytics & big data technologies
- Work with open source technologies (R, Python, Spark etc.)
- Team each has 15 to 30 years of experience working in the advanced and predictive analytics industry

- Deep experience of applied advanced analytics applications across sectors
  - Retail
  - Gaming
  - Utilities
  - Insurance
  - Telecommunications
  - Media
  - FMCG



# Agenda

- An overview of SPSS Statistics
- Reading data from databases and spreadsheets
- Formatting the data
- Creating filters and banded fields
- Using SPSS Tables functionality to create publication-quality reports
- Finding statistically significant differences in groups





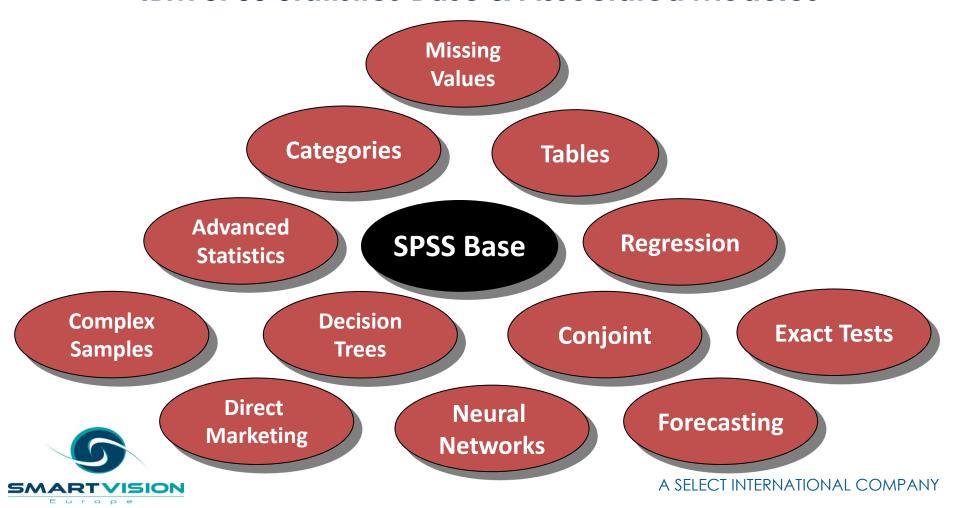
# An Overview of IBM SPSS Statistics

## **SPSS Statistics**

- Since 1968 one of the world's most popular data analysis and statistical interrogation platforms
- Used for everything from epidemiology studies, survey research and business reporting to direct marketing, credit risk, predictive modelling and asset management
- Statistics included in the base software:
  - Descriptive statistics: Cross tabulation, Frequencies, Descriptives statistics
  - Statistical Tests: T-test, ANOVA, Correlation
  - Prediction for numerical outcomes: Linear regression
  - Prediction for identifying groups: Factor analysis, Cluster analysis



## IBM SPSS Statistics Base & Associated Modules

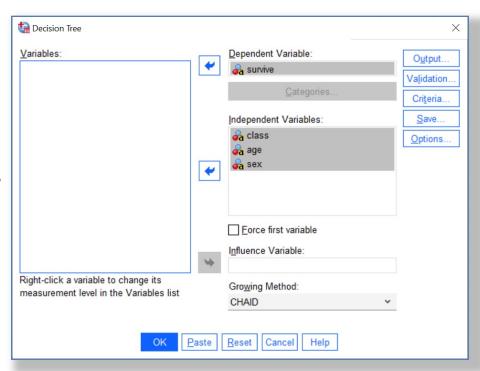




# Example Module: IBM SPSS Decision Trees

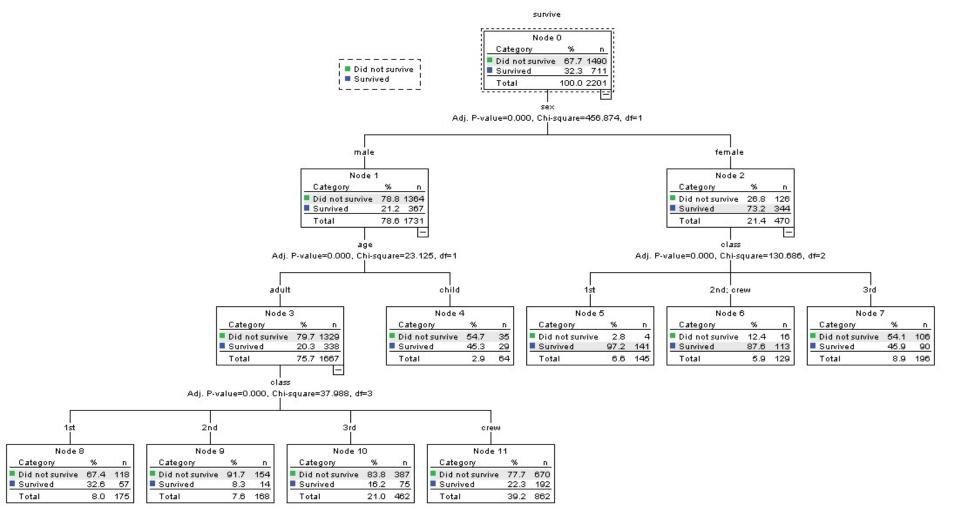
## **SPSS Decision Trees**

- Decision trees are used to:
  - Build predictive models
  - Create profiles of customers/employees/clients
  - Find key behavioural segments
- Very popular because they:
  - Represent models visually
  - Are easy to understand





## **IBM SPSS Decision Trees**



## Smart Vision's Short Video Guides to SPSS Modules

#### IBM SPSS Advanced Statistics

Two minute module overview



#### What's in the Advanced Statistics module?

IBM SPSS Advanced Statistics provides powerful techniques for real-world problems in a variety of disciplines, including medical research, manufacturing, pharmaceuticals, and market research. It is an extremely 'analytically rich' SPSS Statistics module. Advanced Statistics includes a very wide range of multivariate procedures for investigating complex relationships in data. A number of the procedures in IBM SPSS Advanced Statistics are relatively technical in a statistical sense. In particular, Advanced Statistics encompasses General and Generalized Linear Modelling capabilities.

- General Linear Models allow you to model relationships and interactions between many factors. The general linear
  model incorporates a number of different statistical models: ANOVA, MANOVA, ANCOVA, Repeated Measures etc.
- An example of GLM would be one where we wish to see if males spend more money on average in a particular store
  than females when they have been given a particular discount coupon. The model can be made more complicated if
  we include more than one type of coupon or test to see whether region or age makes a difference.
- Generalized Linear Models are an extension of General Linear Models in that they are able to work with a greater range of data distributions. In particular, the model allows for the dependent variable to have a non-normal distribution.

#### SPSS modules

IBM® SPSS® Statistics Base

IBM® SPSS® Advanced Statistics

IBM® SPSS® Bootstrapping

IBM® SPSS® Categories

IBM® SPSS® Complex Samples

IBM® SPSS® Conjoint

IBM® SPSS® Custom Tables

IBM® SPSS® Data Preparation

IBM® SPSS® Decision Trees

IBM® SPSS® Direct Marketing

IBM® SPSS® Exact Tests

IBM® SPSS® Forecasting

IBM® SPSS® Missing Values

IBM® SPSS® Neural Networks

IBM® SPSS® Regression

IBM® SPSS® Bundles



# Three Key Capabilities

The most effective users of technology like SPSS Statistics are able to demonstrate skills in three key areas:

- 1. Reading and formatting data
- 2. Transforming and manipulating data
- 3. Analysis and deployment of results





# Lets look at an example...

# Working with Smart Vision Europe Ltd.

## Sourcing Software

- You can buy your analytical software from us often with discounts
- Assist with selection, pilot, implementation & support of analytical tools
- <a href="http://www.sv-europe.com/buy-spss-online/">http://www.sv-europe.com/buy-spss-online/</a>

## Training and Consulting Services

- Guided consulting & training to develop in house skills
- Delivery of classroom training courses / side by side training support
- Identification & recruitment of analytical skills into your organisation

## Advice and Support

- offer 'no strings attached' technical and business advice relating to analytical activities
- Technical support services



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# Thank you