



Using SPSS Clementine to gain advantage from information



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Agenda

- Introduction to Predictive Analytics
- Our experience with SPSS
- Our relationship with SPSS
- Case studies
- Summary



Predictive Analytics

Predictive Analytics is about knowing what your customers are going to do next... Now!

Deliver **profitable relationships** through customer insight involves **analytical techniques** which **anticipate customer need** and behaviour using for example propensity modelling to **predict customers preference** for a new product or service, combined with information of actual behaviour captured through applying data mining techniques

By analysing, interpreting and evaluating customer data, we enable our clients to **Understand, Predict and Act on Customer Insights**

Question

- **How can you use existing data to get a deeper understanding of customer behaviour?**
- **What marketing strategies can you implement using this deeper understanding?**
- **How should you analyse the market to assess what you should be doing next?**

What this service involves

Search Databases



Identify Patterns



Make Predictions

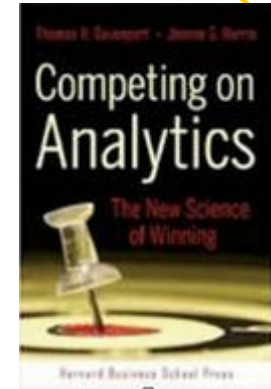
Value of Predictive Analysis

Typical Applications



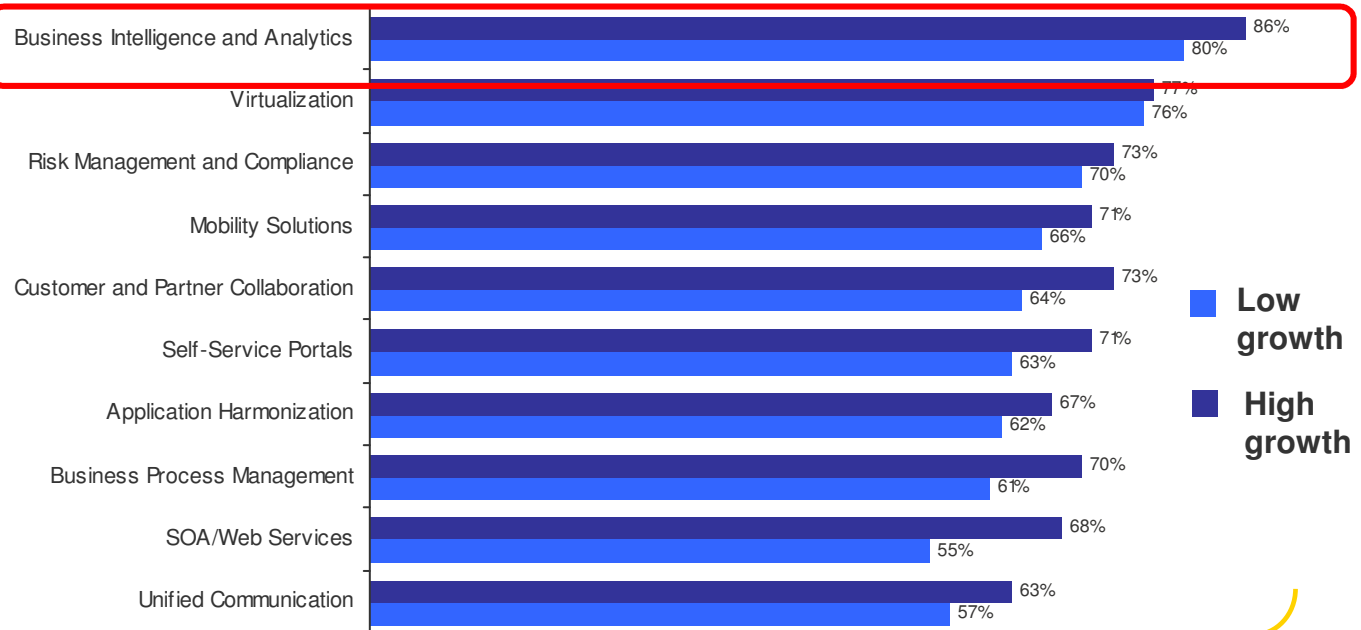
Analytics Critical for Driving Competitive Advantage

“At a time when companies in many industries offer similar products and use comparable technology, high-performance business processes are among the last remaining points of differentiation.”



BI/Analytics #1 investment to improve competitiveness

Source: IBM Global CIO Study 2009; n = 2345



Our experience with SAS / SPSS

We have used SAS / SPSS on a number of analytics/data mining projects. Examples include;

- **High Mobile Customers for ARPU Growth**
 - Looking how far a customer travels (e.g. offer XDA, Blackberry etc)
- **Calling Circles**
 - Regular numbers called (e.g. viral churn risk, viral marketing opportunity)
 - Friends & Families...
- **Social Network Analysis (SNA)**
 - Considering the “overall” calling network of people
 - Emails using fields: date, email_from, emails_to, subject, is_spam, has_viruses, tracking_opens, clickthroughs, forwards
 - Social networking sites (facebook, hi5), peer-to-peer traffic, blogs,
 - Viral marketing (member gets member, pyramidal networking)
- **Profitability**
 - Using Interconnect charging and TV/Broadband data, how profitable are customers?
- **Value of Future Holdings**
 - Why stop at just understanding what customers are worth today? Using advanced Data Mining Logica can predict customer purchasing behaviour to identify tomorrows “most profitable” customers
- **Customer acquisition**
 - Focus acquisition plans on key areas and intelligently spend marketing budget

Our experience with SAS / SPSS

Household / Life-Stage

- What stage of the life-cycle are customers in? Who shares a house with a competitors customer? Does it affect Churn?

Behavioural Segmentation

- Cluster users based on their viewing and surfing behaviour

Web Mining

- Use Usage Data Records (UDR) to understand customer behaviour and target with relevant offers

Text Mining

- By some estimates, up to 80% of data in an enterprise is unstructured, using advanced analytics it is possible to uncover hidden patterns in your data

Churn Modelling

- Develop models to identify churners

Next Best Action

- What is the next best offer I can make to my customer... If I don't then my competitor will!

Product Propensity

- Using Data Mining to predict which products to offer to particular customers

Share of Wallet (SoW)

- Looking at the overall "Home" and "Away" spending pattern of customers to identify areas of opportunities and sales

Our relationship with SAS / SPSS

Logica has a **strategic** partnership with SPSS (IBM). Both companies have agreed to work together to help our mutual clients extract more value from the existing customers. Logica were also named Global Partner of the year by SPSS.

"Following on from IBM hosting the Logica Board, there has been a joint decision between Logica and IBM to leverage greater benefit from our relationship to invest in a joint go to market Business Intelligence and Predictive Analytics alliance to drive incremental solutions together.

Colette McDonnell, IBM Client Executive and Robert Church Alliance Director are exited to work to drive this forward."

Logica are **Gold** partners with SAS and have successfully completed a many global projects implementing their technology.

Logica has over 150+ consultants with SAS / SPSS experience.

Case studies of projects using SAS /SPSS follow;

Threat Analysis using SPSS



Identify Cyber Threats

Identify Insider Threats



Detect Smuggling and Drug Trafficking Associations

Predict Non-Compliance of Foreign Visitors



Ensure Maritime Domain Awareness

Discover Potentially Suspicious Inbound Cargo

Detect Money Laundering Behavior

Detect Fraud



Identify True Identity of Individuals

Better Allocate Security Resources

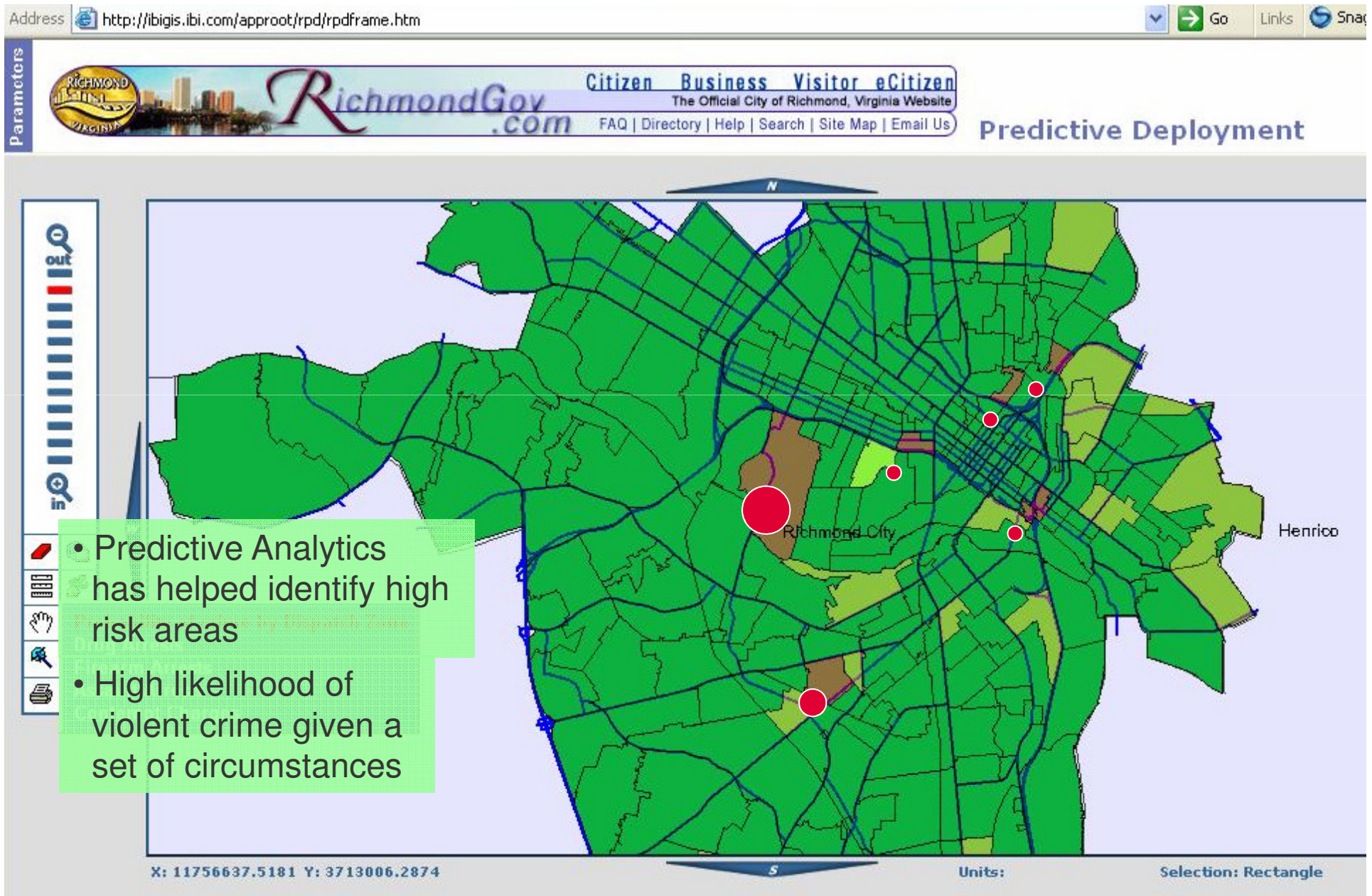


Discover Terrorist Organization Affiliation

Predict Risk Potential for Threats to Safety

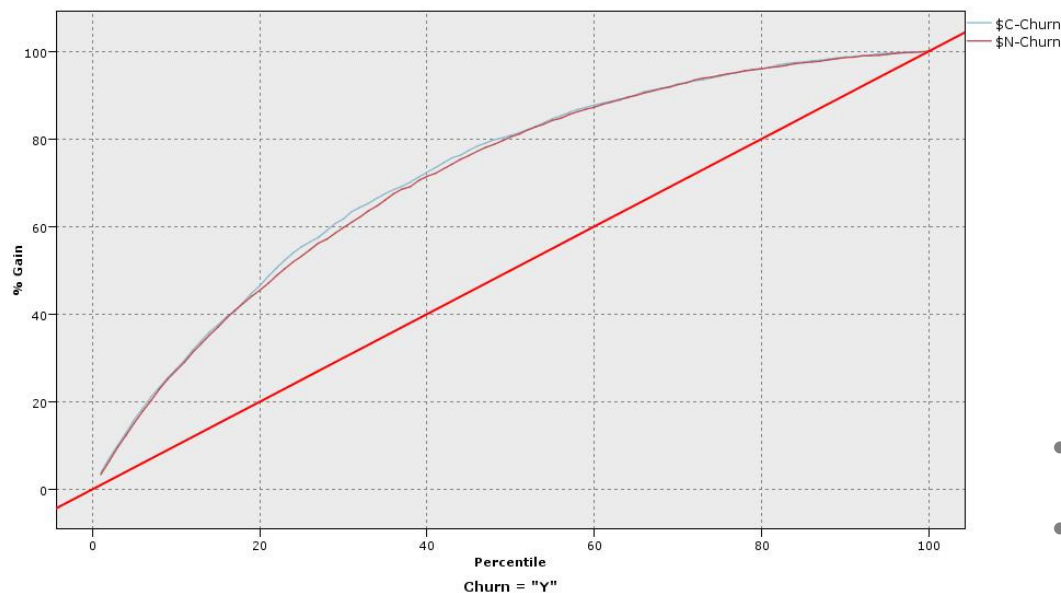


Crime Analysis and Mapping: Deploy Resources More Effectively Using SPSS



Predicting Churn using SPSS

- Logica used SPSS to predict Churn for a UK mobile operator
- Overall Model accuracy was 75%
 - By targeting the top 20% of customers run through the model, the mobile operator was able to identify 45% of customers who were likely to churn



- Key Predictors

- Top up start balance
- Days since last used
- Care calls
- Average calls
- Tariff
- Favourite numbers

- Limited Data

- Short execution time (5 days)

- High ROI and low TCO

Debt Control: Analysis of Involuntary Churn using SPSS

Logica delivered an analysis of fraud / bad debt for a large European mobile operator

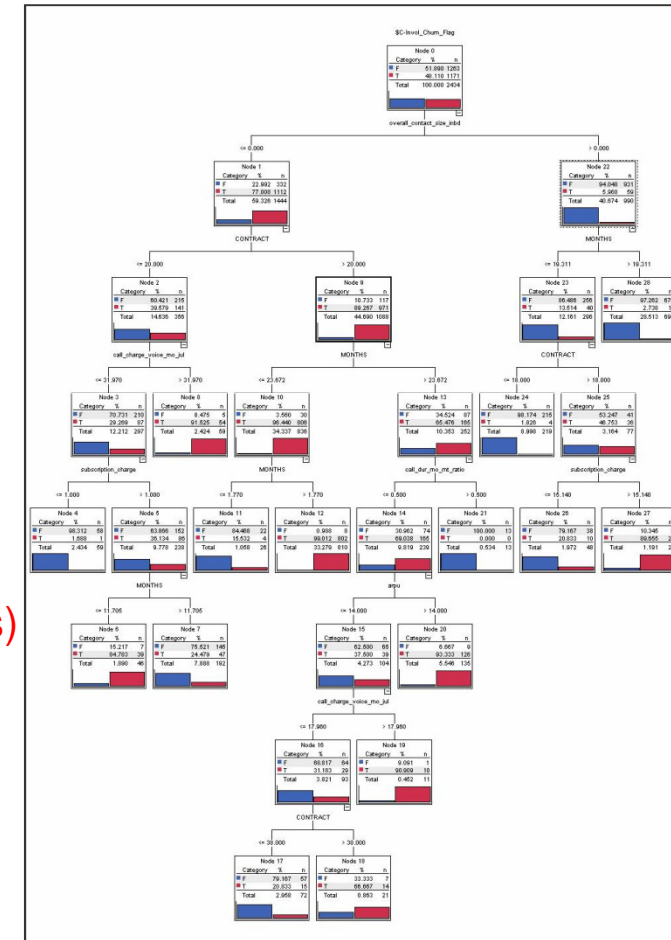
Objective: Could we predict fraud / bad debt to minimise monthly exposure?

C5 algorithm (we also had similar outputs from a neural network)

Results: >90% accuracy

The main predictors (in order of importance):

- 1) Contact size Inbound mostly 0 (Makes only outgoing calls)
- 2) Prefers 24 month contract (small number of 12 months)
- 3) Small months (i.e. tenure)
- 4) Call charge
- 5) Subscription charge
- 6) Average Revenue Per User (ARPU)

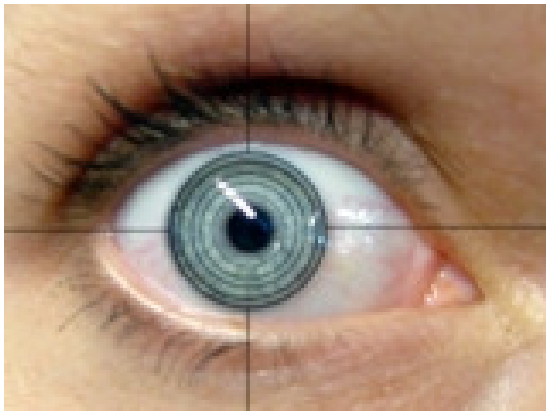


ESSILOR

Supply chain SAS reporting implementation

Business challenges

- World leader in ophthalmic optics, Essilor needs to improve its control on the logistic chain
- They face problems due to an heterogeneous IT architecture decentralized on several continents
- Regarding this stakes and after an upgrade of its Operational Systems, Essilor needs to align its Business Intelligence System (datawarehouse and reporting's applications)



Our solution

Design and implementation of a multidimensional reporting solution based on SAS 9
Datawarehouse and reportings are standardized to accelerate and simplify the deployment on all Essilor sites

Our approach

- Reporting's needs evaluation and KPI's conception
- Design of the data model and of the technical
- Implementation of the Oracle extraction requests and SAS integration programs
- Change management and training

The Result

- OLAP technology allows the users to analyze their data and improve their performance
- Quick appropriation of the reporting tool by the users
- Exchange between countries and a distribution of " best practices "
- Structure composed on 100 tables, 10 cubes and 20 jobs easily portable and allows a very good return on investment.



Essilor is world leader in ophthalmic optics

GDF SUEZ : Campaign management

GDF SUEZ appoints Logica to build a its Campaign Management system

Business Challenge

- Create a system to manage the all campaign management process :
 - Clients selection (targets)
 - Connection to phoning or mailing services
 - Collection of clients reactions
 - Campaign reporting
- Deploy the new solution within a short time period



GDF SUEZ

GDF SUEZ is the provider of manufactured domestic gas over the French territory

Our Solution

- Creation of SAS programs to collect CRM data
- Creation of specific SAS programs using SAS Enterprise Guide and Stored process for clients selection and interfaces creation

Our Approach

- Strong effort on data quality
- Overhaul of clients scores programs (from Data Mining team)
- Several UAT with campaign service providers and end users (marketing)

The Result

- High flexibility of the data sources for client selections (ie. adding sales prospects)
- Significant improvement of campaign realization effort and time
- Ability to manage high volumes

GDF SUEZ : Price simulation

GDF SUEZ appoints Logica to build a gas purchase price simulation

Business Challenge

- Set up a simulation tool for the gas purchase price contracts
- Strong need for confidentiality
- Willingness to use SAS software with a user friendly interface and accessible to users who have no expertise on the tool
- Establish a reliable source of data available through various tools and exportable to other applications



GDF SUEZ

GDF SUEZ is the provider of manufactured domestic gas over the French territory

Our Solution

- Definition of functional structures for market rates series and contract model
- Design of a user oriented language for contract definition (close to SAS language)
- Creation of a web-based application with java interfaces driving SAS functions

Our Approach

- Strong support of functional consultants
- Implementation of the project from design to delivery
- Users Training
- Delivery to an external host

The Result

- Delivery of a secure web application covering all the needs
- Availability of SAS querying tools (Entreprise Guide, Excel Add-IN) for R & D and exploitation of the datawarehouse
- Encryption and security enforcement in the whole process
- Industrialization of the processes

TNS SOFRES

Business challenges

- Overhaul a system based on obsolete technology with poor internal knowledge in TNS Sofres
- Provide a system reliable and ready for the french presidential election
- Project with high visibility regarding the media attention around prime time programs on TV and radio in France
- High performance wanted



TNS Sofres is the leading opinion pollster in France

Our solution

- The solution is based on 2 major streams :
 - a data capture stream based on .NET
 - a complex calculation stream based on SAS 9

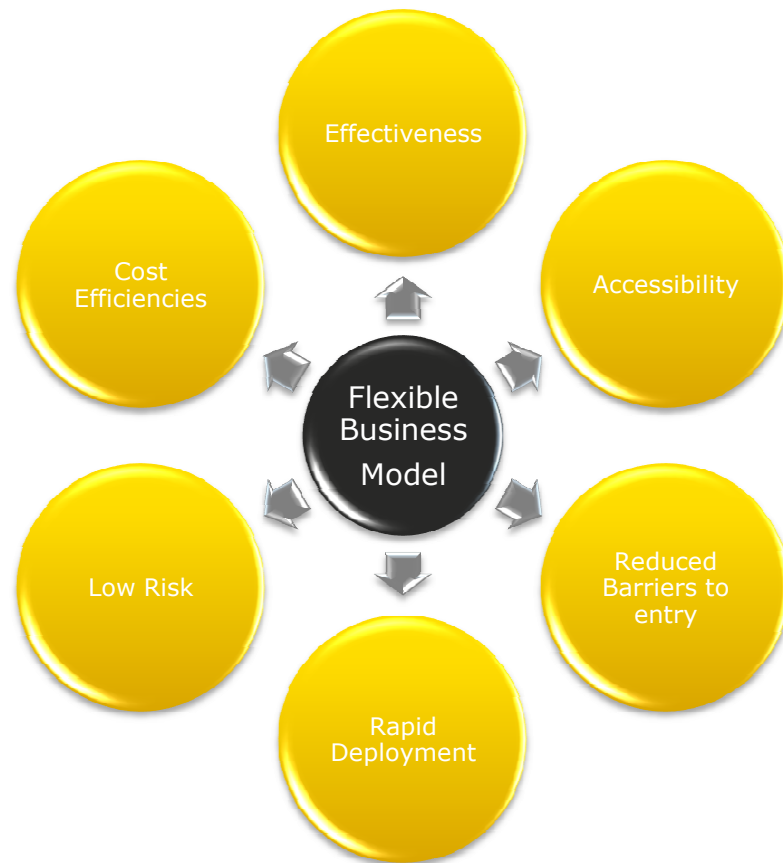
Our approach

- Major steps of the project were to define polls sample and calculation scenarii and to design UAT phasis in order to replay old elections as a test
- Dataquality focus to clean and rationalize data accepted into the system

The Result

- High quality of the estimations supplied by TNS Sofres during the electoral evening because of the algorithm SAS implementation and UAT phasis focus

Summary



- Logica have a deep industry knowledge and a proven track record using SAS / SPSS with over 150 consultants
- Logica don't just provide software or services, we provide solutions!
- Using our Analytics / CRM framework we offer end-to-end capability not just point to point implementations

We have a dedicated experienced team of highly talented statisticians and analysts who have worked across the industry to perfect a wide range of algorithms and techniques

- Using ROI models we can prove the incremental business benefit we generate and bring



Thank you

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