

# Turning data into solutions



**SPECTRUM**  
ANALYSIS  
Geodemographic Modelling & Analysis



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# BIOGRAPHY

Spectrum Analysis is the company to help you in making correct site selection and territory planning decisions in the future, by using facts and data to better understand the location BEFORE committing to the lease or purchase of a property, or the sale of a franchise area.

Whether you are in retail, a service business, schools or clubs, use Data to make better business decisions.

Site selection, Market Analysis and Territory Planning using demographics and statistics are what we live and breathe.



## WHY US

20-year experience in strategic network planning and market analysis

6000+ demographic analysis and mapping projects

Provide data-driven solutions  
/Bring sense to big data

Your insurance to minimize future disputes  
with franchisees

Focus-Listening-Expert-Practical

# PARTNERS

## Franchise Industry



## Partners



## Professional Associations





# CLIENTS





# SERVICES

A red car is positioned on a map, with a red pushpin placed nearby. The map shows various roads and geographical features.

## Territory Planning

The days of dividing territories based upon populations (or even the dreaded “black texta on laminated wall map” approach) are thankfully over. Spectrum Analysis has developed a superior, foolproof method of Territory Planning and Retail Network Mapping for carving up markets into equitable territories, whilst also taking into account the industry type and target market to assess the B2B component. This ensures that resultant territories offer equitable sales or profit potential.

Territories can be presented as aggregate Postcodes for ease of administration and marketing, or even down to suburbs or telephone exchange areas in the case of 13 call numbers diversion.



Carving up an area using this method ensures that there is no 'first in best dressed' rush on territories, and operator performance really can be compared and assessed across a network. Proper Franchise Territory Planning ensures you have the maximum number of territories, each offering similar business potential for your franchisees.

Deliverables for Territory Planning project are tailored to customers' needs, and may include territory overview maps, individual maps, relevant territory data, interactive maps, Google Earth output, etc.

## RETAIL AND FRANCHISE 1



# SERVICES

## Shopping Centres

Spectrum Analysis maintains up-to-date data on Australian Shopping Malls.

Information includes GLAR (Gross Lettable Area Retail), MAT (Moving Annual Turnover), Annual Pedestrian Traffic, Tenant Mix, Major Tenants, Food Offerings and CarParking.

All Centres are also mapped for reference, and can be easily viewed using Google Earth or other mapping systems.

Spectrum can also provide Datapaks around every shopping centre at various radius for easy comparison.



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## Shopping Strips

While information is relatively easy to locate on shopping mall size and tenants, there has traditionally not been too accurate information on the size and tenure of the classic Australian Shopping Strips.

The Shopping Strip Locator is a way of comparing Shopping Strips for size and content of businesses that is complementary to your specific needs.

The Strategic Shopping Strip Locator involves the evaluation of each shopping strip by assessing two things: a) whether it has certain characteristics, which enhance your business b) whether it is large enough to support your outlet. Using business-listing databases, mapping and analysis helps to locate, map and prioritise each strip that meets the selection criteria. Individual strips are measured by numbers of supermarkets, banks, pharmacies, newsagents, café / restaurants and other criteria.



# Sales Prediction Modelling

Sales Prediction Models forecast outlet sales using a mathematical formula developed specifically for your industry.

The process begins by analysing the characteristics against the performance of your existing network. From this, the underlying factors (or drivers) responsible for sales performance can be identified and then built into a prediction model. Once defined, the prediction model accepts location and facility characteristics as inputs and returns a performance prediction for the site.

In addition to their obvious role in prioritising and assessing new site potential, sales prediction models can also assist to

- Assess the economics of store relocations
- Assess possible sales cannibalisation impacts of a new outlet on existing outlets
- Assess actual vs. potential performance for any existing outlet.



**2 PREDICTION  
AND MODELLING**



# SERVICES



## Benefits

- Understand the contribution various factors make to sales performance
- Estimate the performance of proposed outlets at any location
- Select the most appropriate facility for a given location
- Calculate the effects competitors outlets have on sales performance
- Calculate the sales cannibalisation effect of opening a new outlet
- Perform scenario planning
- Alleviates “gut feel” from decision making
- Compare actual vs. potential performance of existing outlets
- Prioritise “New Build” areas.



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# Artificial neural network approach

Neural networks have been known to outperform more traditional prediction techniques in numerous situations. This can be attributed to the ability of neural networks to detect complex non-linear relationships drivers and the dependent variable (i.e. performance of an outlet, interactions between drivers etc).

Spectrum has built a system that enables one to employ the power of neural networks to model complex real-world data with high accuracy. This includes artificial neural network software featuring 15 state-of-the-art neural models and various algorithms that have been developed in-house.

## 2 PREDICTION AND MODELLING



# SERVICES

## Retail gravity modeling

Retail Gravity Modelling is a method of sales prediction modelling that predicts the probability of individuals (or households) at any location (known as a node, normally a SA1) patronising any one of a collection of store choices in their area. The modelling technique uses travel distance to each store choice in collaboration with a variety of 'attractiveness' measures to define the probability model.

Given its retail gravitation basis, this methodology is particularly well suited to understanding trade areas and sales potential for shopping malls.

In order to undertake this type of analysis, estimates of spend potential need to be made for each node in the model. Estimates of competition sales volumes also significantly improve the predictive ability of the models.







## **Sales Cannibalisation Modelling**

In an established or mature network, consideration of the impact of a new store on existing stores is vital. While a new store may generate acceptable sales, if a high proportion of these sales have been stolen (cannibalised) from one of your existing outlets, the new store may not be economically justified.

In a franchise network, cannibalisation issues are particularly important, as existing franchisees need reassurance that network expansion will not impact upon their livelihoods.

Having a Geographical Information System (GIS) called Pitney Bowes MapInfo to work with allows us to run complex models to emulate Retail Gravity with high accuracy.

Typically sales cannibalisation modelling is encapsulated into sales predictive models discussed elsewhere within this brochure, but models can be developed independently using a history of new store openings and the impact (pre and post new store opening) the new store has on surrounding stores.

## **2 PREDICTION AND MODELLING**



# SERVICES

## Check chart

A Check Chart is a tool used to do the first evaluation of a site for its potential. The chart can be filled out by any person and does not require access to demographic or competition data. The check chart returns a score to enable decision on what level of interest to give to a site.

The process involves identifying the drivers responsible for sales performance of the franchise stores and developing an initial check chart. The individual stores are then scored using this check chart and the scores are compared to their respective turnover to assess the reliability of the scoring system. Statistical analysis is then performed to calibrate the check chart.

Once defined, the check chart accepts location and facility characteristics as inputs and returns a performance prediction for the site.







## Site And Area Potential Reports

A Site Potential Report (SPR) is a market assessment of an area drawing together demographics, competition and site specific data. It is required when a site is under consideration for a potential store and the trade area needs to be assessed for its suitability. Information is provided for the site's local catchment or trade area, which may be a postcode, a distance radius, or a travel time radius. Specific site characteristics are also looked at either through a site visit, or other information provided. The output is assistance in making the final decision to proceed with the location.

An Area Potential Report is about the demographics of the area and their suitability for what you wish to sell. This means a specific site has not been identified and rather you are now instructing your site selection team to actively seek a store in this area.





## Consulting Services

With 20 years' experience at Spectrum, and over 20 years with a major oil company, Peter and the team can assist in many forms of consulting with your business. Peter is a Certified Management Consultant, and the team have undertaken many different jobs in this area. Whether it be addressing a specific problem, or working out what the future holds for the business, the team at Spectrum are well qualified for the challenge.

- Strategic Network Planning
- Franchise Establishment
- Expert Witness Services
- Pitney Bowes MapInfo Applications
- Site Evaluation
- Territory Issues
- Site selection and lease negotiation assistance.

**PROPERTY  
SERVICES 3**



# SERVICES

86%

62%

## Data Bureau and Web Scrapping Services

Spectrum Analysis maintains detailed lists of various kinds of businesses by brand (e.g. supermarkets, pharmacies, QSRs). These lists are useful to gain insights about the spread of the various brands and also to conduct competitor analysis.

We also have the capacity and capability to compile lists for business types for which we do not hold a list. We typically do this by compiling data from a wide variety of sources (web scrapping different brand websites, contacting industry associations, accessing public directory information, etc) and then cleaning the data to make it useable.



# Web-based mapping solutions

Spectrum has successfully developed web-based mapping visualization tool to assist clients with data and territory management. We have experience working with Mango maps, Google Maps and Open source mapping as options for our clients.

The product provides clients with access to their franchise management resources from different places and devices. Whether it is preferred marketing area/territory boundary information or store location, the tool allows visualizing a boundary or a location overlay on street maps along with tailored data sets. Compared to hard copy maps, web-based maps have a dynamic and high zoom functionality and many other advantages including detailed street navigation.

Another critical advantage of web-based mapping tool is that clients and other stakeholders can visualize the latest and accurate marketing area/territory boundary information, thus, minimizing any risk of disputes relating to marketing area/territory boundaries. Cloud-based storage also minimizes the chance of data being lost and allows for multiple users to access the information at the same time.



**DATA AND  
MAPPING 4**



# SERVICES

## Datapak

Spectrum Analysis has distilled a range of commercially relevant information into a single, easy to use package. The datapak is a powerful yet simple-to-understand hard copy (or electronic PDF) collection of demographics mapping information, profiling any local area of interest.

Featuring a Demographic Summary, a Business Summary, a Business List, and a Detailed Map, this Datapak can assist with questions about what kinds of potential customer lives in the area, what kind of businesses/employees are based in the area, and how people are likely to move around within the area.





# GIS System

While a map is an easy tool to interpret complex geographical information, the software and data required to produce this user friendly output can be expensive and technically challenging. That is why many organisations choose to outsource their specialist mapping requirements.

Spectrum offers specialist GIS consultancy and can produce the required outputs in either hardcopy (up to A0 Wall Map size), electronic or web based format.

Should customers wish to undertake their own analysis in house (without the expense of employing specialist GIS professionals), Spectrum can assist with the development of user friendly electronic mapping interfaces including web based solutions.

Spectrum's expert consultants can also assist in the running and management of any Pitney Bowes MapInfo GIS, especially if there are setup and ongoing maintenance requirements, along with creating specific MapBasic products.

**DATA AND  
MAPPING 4**



## Increase student enrolments with geo-spatial strategies

We believe schools need to truly understand where the students are coming from, and we have the capabilities to help schools learn about their student data and the schools' trade areas. We can assist schools in the following aspects:

- Analysis of schools and students' demographics, such as levels of student penetration by area;
- Strategies for increasing school student enrolments primarily in AU and NZ, and be able to use the same logic in other countries;
- Improve marketing efficiency by defining Primary and Secondary marketing areas as well as areas for expansion;
- Review efficiency of current school bus routes and provide sound recommendations of change and improvement.
- Assist in major infrastructure decisions for the long term benefits of the school.

## School Bus Analysis

Public transport and bus routes play a big part in drawing students in from outside the school's immediate localised catchment area. The safety and accessibility component in particular is an essential part of most parents' school decisions.

With our expertise in data analysis, we can assist schools in analysing the efficiency of their school buses, which will help their improvement in their network and strategic plans for growth.



## Web-based mapping for schools

A web based mapping system tailored for schools is simple to use. It will allow you to see your students' details, such as enrolment and addresses, and other useful layers such as SEIFA, the total available student market, primary and secondary catchment areas, relevant bus routes and public transport, future enrolments, competitor schools and feeder schools. This interactive mapping will provide you with a better understanding of your school's location and surrounding area, such as population growth and private school boys/girls versus total population.

**"Knox Grammar School is the largest private school in Sydney, and a leader in many areas within the industry. We have used Spectrum Analysis on three separate occasions to understand our enrolments and catchment areas, and we use this data in making informed, strategic decisions regarding the School's long term future, including major marketing decisions."**

**Scott James – Headmaster**

**SCHOOL  
ENROLMENT  
ANALYSIS 5**





[www.spectrumanalysis.com.au](http://www.spectrumanalysis.com.au)

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