

## Define, Develop, Deploy and Verify Customer Strategies

Many organizations effectively use data mining and predictive analytics to improve their performance, be it in areas of credit risk, marketing planning or fraud detection. Data mining ultimately results in a better understanding of your customer base through data profiling and modeling, allowing you to predict the likelihood of a customer response such as defaulting on credit, responding to an up sell offer or committing a fraudulent act.

What data mining does not do is allow you to use your results from exploration and modeling, and segment your customer universe, determine key performance indicators (KPIs) for the segments, and develop strategies and related actions for each of the segments based on KPIs. Many data mining products stop once the score has been computed. This ignores the dynamic and complex task of acting on the model results in a specific business context to achieve optimal profitability. StrategyBUILDER, an add on module for KnowledgeSTUDIO®, allows you to formulate the necessary business rules and model cutoff points to take action.

### StrategyBUILDER

A strategy, described as a set of rules and related actions, is developed to help achieve a business objective when interacting with a customer. StrategyBUILDER uses a familiar tree structure to help define, develop, deploy and verify strategies. With StrategyBUILDER, added to KnowledgeSTUDIO, all processes can be completed within one environment from data import, to data preparation and profiling through to predictive modeling, strategy development and deployment.

The basis of StrategyBUILDER is the ability to split a tree structure, on various data elements including scores and segments from data models, and then develop key performance indicators (KPIs) for each segment (node of the tree). The KPIs are calculated metrics that are often performance based, such as profit. The purpose of creating the segments and calculating the KPIs is to then apply treatments or actions to undertake for each segment. These treatments can be activities such as varying credit limits, collections strategy options (do nothing, call, legal action, letter etc), or marketing campaign options (direct mail, telemarket, coupon offer etc).

*"StrategyBUILDER is an amazing new feature. It allows us to add some key performance variables on a tree, which then provides us with a complete picture for each segmentation performance."*

Sui Chen  
Credit Risk Analyst  
Hudson Bay Company

*"Predictive analytics solutions generate an average return on investment of 145%."*

IDC (October 2003)

Analysts familiar with data analysis and decision trees will find that StrategyBUILDER is simple, intuitive, and adds naturally to the flow of KnowledgeSTUDIO. In order to complete a project the following steps need to be executed:

1. Define the business objective
2. Extract a dataset and complete data preparation
3. Design your strategy
  - a. Build a strategy tree by splitting on various data points and calculate KPIs for each segment (tree node)
  - b. Assign actions to segments based on KPI calculations
4. Verify and approve strategies
5. Translate into deployment language and deploy to production
6. Monitor success

## Features and Functionality

Tree growth of a strategy tree is very similar to the decision tree functionality of KnowledgeSTUDIO. Once you have imported your dataset, you can split the tree data on any data element (e.g. predictive scores, demographic data etc) in order to complete your segmentation. You are also able to bin your data through a range editor prior to completing splits.

Once your strategy tree is complete, and you are satisfied with your segmentation, you develop strategies, composed of rules and related actions, to apply to each segment. In the case of a strategy tree, each segment is a leaf node and within each segment you can calculate KPIs for the corresponding data. These KPI calculations

form of five expressions 1) sum 2) average 3) conditional aggregates 4) index and 5) discrete distribution.

Once you have calculated KPIs for your segments you complete your strategy development by assigning treatments or actions based on business rules and how they relate to your KPIs. For example, you may wish to extend the credit limit of all those customers within certain geographies, with a risk score below a pre-determined limit and with a particular average profit. Or in a marketing context, you may want to deploy an up-sell offer to all those clients in certain segments whose age is greater than fifty and with an account balance less than \$500.

Leverage your Data to Make  
Confident Decisions

As you are developing and changing your tree and related strategies, StrategyBUILDER provides useful reports and graphics to visualize and track the progression of the plans.

- **Chart** – shows the distribution of variables within a chosen node. Has both static and dynamic option.
- **Node Report** – displays segments and KPI node calculation in spreadsheet format for sorting by calculations and the bulk application of treatments.
- **Profile Chart** – Visual view of segmentation of some of the information in the node report.

Verification of a strategy tree allows an analyst to perform statistical validation of a strategy prior to deployment, confirm that a deployed strategy is working as anticipated, and monitor the performance of strategies as they age. These are accomplished by comparing node calculations, within a tree structure, between two datasets.

With StrategyBUILDER you will make “Better Business Decisions. Everyday.”™

### Key Features of StrategyBUILDER

- Add on module for KnowledgeSTUDIO.
- Utilizes user-friendly tree structure to develop customer segments.
- Strategies are developed based on rules and corresponding treatments.
  - KPIs are simply calculated for each segment and used to assign treatments.
- Strategies are easily deployed into production and through various code languages.
- Verification and monitoring is simple and easy for on-going development of strategies.

Angoss Software Corporation  
 111 George Street  
 Toronto ON M5A 2N4  
 Tel: 1-866-687-8838  
 Fax: 1-416-593-5077  
[www.angoss.com](http://www.angoss.com)