

# StrategyBUILDER™

Define, Develop, Deploy and Verify  
Customer Strategies



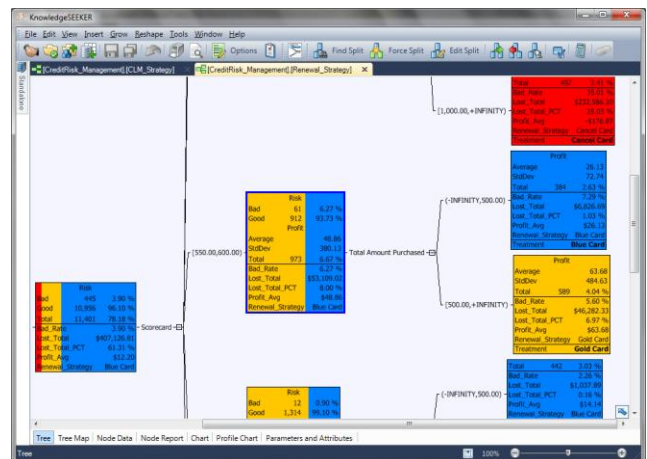
Many organizations effectively use data mining and predictive analytics to improve their performance, be it in areas of credit risk, marketing planning or fraud detection. Data mining ultimately results in a better understanding of your customer base through data profiling and modeling, allowing you 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, determine key performance indicators (KPIs) for the segments of your customer universe, 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, a standard module included in KnowledgeSEEKER®, 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 KnowledgeSEEKER or KnowledgeSTUDIO, all processes can be completed within one environment from data import, preparation and profiling through to predictive modeling, strategy development and deployment.

The basis of StrategyBUILDER is the ability to use the Decision Tree framework to perform segmentation based on various data elements including scores from predictive models, and then develop key performance indicators (KPIs) for each node of the tree. The KPIs are calculated metrics that are often performance-based, such as total profit or loss, or rate of bad debt. The purpose of creating the segments and calculating the KPIs is to apply appropriate treatments or actions 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).



Analysts familiar with data analysis and decision trees will find that StrategyBUILDER is simple and intuitive, and provides a natural extension to the other workflows of KnowledgeSEEKER and KnowledgeSTUDIO.

In order to complete a project, the following steps need to be executed:

1. Define the business objective.
2. Import or connect to a dataset and complete data preparation.
3. Design your strategy
  - a. Build a strategy tree by splitting on various attributes and calculate KPIs for each segment (tree node)
  - b. Assign actions to segments based on KPI calculations
4. Verify and approve strategies
5. Deploy strategies to production directly or via automatic translation into deployment language
6. Monitor strategy performance

## Features and Functionality

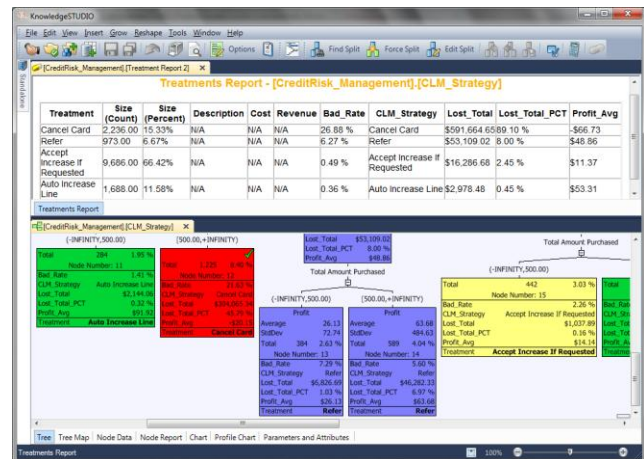
Growing a Strategy Tree is very similar to growing a Decision Tree. You can split the data segments on any attribute (e.g., predictive scores, demographic data etc). The splits can be built automatically using intelligent splitting algorithms or manually using a flexible range editor. Unlike Decision Trees, Strategy Trees allow the use of multiple target variables for richer segmentation.

You can calculate KPIs for each segment at any point during or after the segmentation process. SQL expressions for the KPI calculations can be entered manually or using wizards for most common calculations, such as sum, average, conditional aggregates, index, and 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 for all 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 clients in certain segments whose age is greater than fifty and with an account balance less than \$500.

As you are developing and changing your tree and related strategies, StrategyBUILDER provides useful reports and graphics to visualize and track the effects of your segmentation and treatment assignments.



- The *Node Report* view provides terminal node information including node rules, values of node calculations, and treatment statistics in a tabular form.
- The *Profile Chart* view shows the KPI calculation values at terminal nodes in the form of a bar chart.
- *Treatment Report* shows all assigned treatments and their attributes, such as cost and revenue.

Strategies can be validated and tested against test datasets and partitions or external data. Statistical validation of a strategy prior to deployment allows an analyst to 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.

Strategies can be deployed directly by generating treatment lists for target datasets, or by automatically converting the strategy tree to SAS, SQL, or SPSS program code to be run in an external analytics environment or database.

Both development and deployment of strategies is supported by the Angoss In-Database Analytics driver, which is available as an optional add-on. It allows you to leverage your existing data warehouse investment, and perform data mining and modeling without the data ever leaving the database.

#### KEY BENEFITS

- Utilizes user-friendly tree structure to develop segments.
- Multiple target variables for richer segmentation.
- More feedback and control ensured by calculations of key performance metrics (KPIs) at every segment
- Treatment assignment based on business rules and KPIs
- Automatic code generation for deployment rules out manual coding errors
- Easy Strategy verification and monitoring for on-going development of strategies.

## About Angoss Software

As a global leader in predictive analytics, Angoss helps businesses increase sales and profitability, and reduce risk. Angoss helps businesses discover valuable insight and intelligence from their data while providing clear and detailed recommendations on the best and most profitable opportunities to pursue to improve sales, marketing and risk performance.

Our suite of desktop, client-server and in-database software products and Software-as-a-Service solutions make predictive analytics accessible and easy to use for technical and business users. Many of the world's leading organizations use Angoss software products and solutions to grow revenue, increase sales productivity and improve marketing effectiveness while reducing risk and cost.

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