

# Application Story



## Bottom Line

**Kraft's high-performance analytics and superior visual reporting solution serve up great tasting products and improve productivity by 375%**

## Company Overview

Kraft Foods, a global leader in branded foods and beverages markets many of the world's leading food brands including *Kraft* cheese, *Maxwell House* and *Jacobs* coffees, *Nabisco* cookies and crackers, *Philadelphia* cream cheese, *Oscar Mayer* meats, *Post* cereals and *Milka* chocolates in more than 150 countries. The company has built its reputation as a provider of affordable, great-tasting products through its commitment to quality and innovation. Kraft products are found in 99% of all households.

## The Challenge

Frank Rossi, Principal Scientist, Applied Statistics and Alicia Thomas, Program Manager, Consumer and Sensory Services are responsible for providing high quality information to guide product development. Thomas manages a team of sensory scientists who train and manage human panels that provide mission-critical information based on sophisticated sensory criteria, for example, "Does the cheese slice need to be firmer?" or "Is the coffee too bitter?" that is analyzed by Rossi's team. Robust analytic processing provides Kraft's decision-makers with the information they need quickly to deliver high-quality products and refine testing procedures.

"Effective evaluation of our panelists is essential," said Thomas. "We use the information that Rossi's team delivers to make continuous improvements to testing standards and to refine training of sensory panelists who evaluate our products." Rossi's team performs analysis and provides Thomas with one-page Trellis reports that allow her team to identify opportunities for improvement quickly or to understand where her team is performing well.

## The Strategy

Rossi and Thomas and their team's roles are critical in the early stages of product formulation. Rossi and his team (along with Thomas' sensory specialists) evaluate panelist performance over time to ensure that they are providing consistent, reliable information. Information received from panelists helps decision-makers make changes in business processes. "For example, if a product's flavor is not meeting our high standards, we may adjust our product formulations or consider switching suppliers," said Rossi. "S-PLUS provides fact-based information that helps our decision-makers make smart, actionable decisions."

## Key Benefits

“We selected S-PLUS because it offered superior visualization tools and could provide information-rich, one-page analytic reports,” said Rossi. “Further, the software offers a flexible programming language for prototyping new analytics quickly to meet changing conditions. High-performance analytics and superior visualization capabilities make it an indispensable part of our organization and improves productivity.”

## Calculating ROI

Rossi and Thomas have improved productivity by reducing paper-based reporting into concise, one-page analytic reports. “Historically, we would perform comprehensive statistical analyses that could require hours to complete and delivered reams of tables and charts for Thomas’ team,” said Rossi. “With S-PLUS, I can successfully perform advanced statistical analysis and provide clear, one-page reports to identify patterns, trends and relationships in our data within minutes,” said Rossi.

Thomas agrees, “Historically, it would take several hours to read complex 50-page reports to extract the information required to make actionable decisions. With S-PLUS Trellis graphics, the information is very focused and the team is able to gain the intelligence they need. The reports provide a better overview of performance and provide a focused, immediate way for extracting intelligence from within our organization.”

Rossi and Thomas believe that the performance and visualization provided by S-PLUS software allows them to improve productivity and ensure the integrity and quality of Kraft products on a daily basis.

ROI Direct Benefits	Before	After	Savings
Analytic Reporting	1 hour	Minutes	Time
Decision-making based on analytic reports	Hours	Minutes	Time
Indirect Benefits			
Communication	Hard to digest reports	Easier to extract intelligence from reports	Time
Trellis Graphics	Hard to compare results	Easier to compare results	Time
Faster Analytics	Waiting for results	Faster access to important information	Time and indirect costs
Using resources wisely	Time-consuming reporting process	Fast and easy analytic reporting	Better insight into product formulation.
Improved morale	Complex reporting was less intuitive	Easy-to-understand reports makes gaining intelligence faster	Less time to gain insight to change product formulation.
More confident decision-making	Time consuming analytic reports required interpretation and cross-checking.	Easy-to-read one page reports based on robust analytics provide information for confident decision-making.	Better decisions.

**Applications**

- Exploratory Data Analysis
- Visualization
- Data Mining

**Products**

- S-PLUS®