



# An Open Survey Platform for the Future...Now

## Executive Summary

In recent years, online market and survey research has exploded becoming a multi-billion dollar industry worldwide. The opportunities created by this shift have caused challenges from a business and technology perspective.

SPSS Inc. has more than 35 years of experience developing technology solutions for all user types of market and survey researchers. SPSS has recently released a revolutionary market research platform to provide researchers with more choices and the freedom to create applications to fit within their business processes.

We call this platform Dimensions™. The platform is built on the SPSS MR data model and was created to enable the creative implementation, management and adaptation of survey research processes. Dimensions supports the complete end-to-end research process and promotes integration with your client's enterprise data and other software tools. You get more seamless and efficient work processes, easier fusion and analysis of data and more dynamic means of delivering results to your customers.

This dramatic architecture is open, scalable and flexible — enabling organizations to customize software applications around their business processes — not the other way around.

## Pushing the Envelope

The software you choose should help free your business of constraints – not add to them. It should help you add value and uniqueness to your offering in the marketplace – not get in your way. What we as software suppliers must do is to create an environment within which many different ways of working can be planned and executed.

Historically, the survey research industry has been forced to accept:

- Limitations to the flexibility of software tools because of proprietary data structures and architectures
- The need to re-invent core MR functionality for custom applications, rather than reusing the power of existing software components
- Barriers to the interchange of survey data between software systems and operating environments

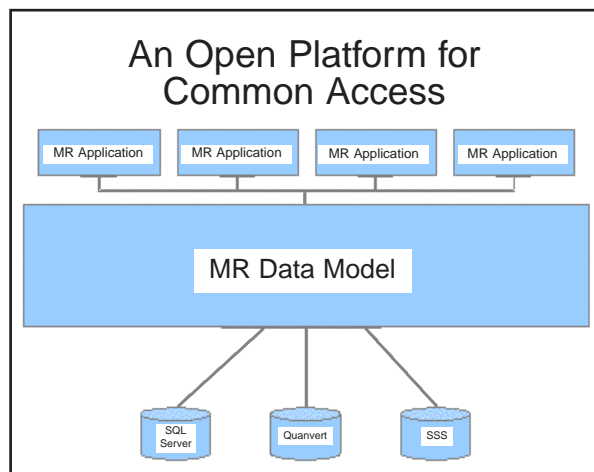
This industry is beginning to see a growing client demand for more complex analysis and data mining, for customer relationship management, Web-based publishing of interactive databases, and executive information systems and marketing information portals that integrate multiple data streams. As we rise to these challenges, we need the tools to overcome fundamental inefficiencies arising from the difficulty of integrating and adapting applications, sometimes from multiple vendors, to create comprehensive, cost-effective solutions that support the creation value for research clients.

Software products are merely tools in the construction of processes and solutions. A supplier of software tools may offer advice and consultancy on best practices and innovative thinking – but cannot and should not – prescribe or limit a way of working. The Dimensions products are a growing set of tools that enable the creative implementation, management and adaptation of survey research processes. And at the core of this architecture is a technology called the SPSS MR data model.

## The SPSS MR Data Model – The Core of Dimensions

The key to the Dimensions architecture and its benefits lies in the SPSS MR data model. The data model is a methodology (in programmer’s terms, an “API”) for managing data of differing formats, structures, and storage mechanisms. Applications using the data model can read or write data to or from any source, regardless of the storage technology. Each user program is written using a standard interface, and the data model hides the implementation details of underlying, package-specific storage architectures. Thus, the application can “know about” many data formats, and be insulated from any changes to them, without the programmer’s even knowing that they exist.

Further, the data model provides functions to handle tasks that are common to many MR applications. It gives the programmer the “hooks” to handle. For instance, working with multi-response questions, hierarchical datasets, tracking of study versions and simple aggregation become quick and simple tasks. Functionality doesn’t have to be reinvented for each study. This helps free the programmer to focus on the unique aspects of the application – where the value is added.



Finally, the data model is based on Microsoft® technology that makes it straightforward for customers to create custom applications in the Windows®/ASP environment, incorporating Microsoft® Office® and other programs.

Thus, the data model is intended to develop MR applications independent of data storage formats.

It makes it easy to:

- Read and write MR data
- Develop new MR applications faster and more reliably
- Leverage or integrate 3rd party tools

The data model is not a data repository, data format, or schema for storing data. It is a system that gives programmers the ability to efficiently develop applications that are not concerned with, or limited by, any particular data format. This frees the user to adapt applications to new and unforeseen scenarios without the need to spend time dealing with data formatting.

The data model is at the hub of the Dimensions architecture. Each Dimensions package is, in effect, a spoke that communicates with all the others and with third-party applications through this hub.

## Benefits

The key benefit for the survey research community will lie well beyond simple transparency of data access. Whether your company adopts a package that meets your current needs or invests in extensive proprietary development, you'll want to know that the software supports your ability to customize and extend your systems, products and business processes. With our help, with one of our partners or on your own.

Your software should support:

- Opportunity to re-engineer and broaden the business
- Control to customize the research process
- Independence to differentiate through innovation
- Power (speed, quality and efficiency) to reap substantial productivity gains

A second real-world example might help to illustrate this last point:

The construction of paper questionnaires for scanning often involves some fairly extensive formatting, as well as a time-consuming step in which fields on the paper are mapped into the scanning software. We've combined third-party software with our data model and a proprietary application to create a solution that automates much of the formatting – and reduces the mapping process from one that often requires a day or more (depending on the questionnaire) to a matter of seconds. Further, changes to the questionnaire are automatically handled, both in the formatting and in the mapping to the scanning software. This saves multiple iterations of the manual mapping process, and allows agencies to be far more flexible and responsive.

## Data Processing

In general, the biggest data processing beneficiaries to date are those who deal with data from numerous different data collection sources. Instead of converting, remapping and exporting data and creating a myriad of new files, one is now able to access these disparate data sets directly with those analytical tools that are data model enabled (e.g., Dimensions products such as mrInterview™ and mrTables™).

We are already analyzing data seamlessly from mrInterview, Quantum and Quanvert, and SPSS®, with other SPSS-owned systems to follow. Interest has also been shown by a number of outside organizations including competitors, the Triple-S Committee and a number of market research companies with their own proprietary systems. This developing consensus behind the SPSS data model will position it, we believe, as an industry standard for the interchange of MR Data.

*“...the [Dimensions] platform's truly global capabilities fulfill a critical need for our business. We really need to have a broad array of capabilities and, at the same time, we want to be consistent and to be able to analyze the results globally.”*

Barb Lindsey, Director CMK  
Procter & Gamble Company

## Flexibility

Dimensions is “open” in two ways: first, it is built around open, industry-standard (Microsoft®) technologies; and second, it provides an open, published interface (API) for everyone. The first allows programs developed around the data model to interact smoothly with a large body of other standards-based software, allowing them to be combined easily as components of more complex systems. The second allows others outside SPSS – clients, partner companies and even competitors – to easily take advantage of the benefits offered by the data model.

The use of standards-based Microsoft® technologies provides a tremendous efficiency benefit at every level – whether you’re simply loading a dataset into Excel with a few lines of Visual Basic application (VBA), creating a complex tracking environment or a marketing information portal. Because you can work with survey data independently of the underlying storage format, you are not tied to any one product or software supplier. The result is greater flexibility and improved business processes.

*“We view SPSS Inc.’s Dimensions products as a major enhancement to our research infrastructure. Dimensions offers us a platform on which we can build our own market research solutions, providing us with the ability to offer our customers a unique and customizable service.”*

*-Michael Reuscher, Vice President  
IT Project Management, Synovate*

## Looking Forward: Some Potential Scenarios

Here are four brief examples of applications that may help to illustrate Dimensions’ potential to help enhance productivity, competitive edge, and profitability.

First, envision an integrated, global data system for a 50-country customer/partner satisfaction project. The survey is just one element in a global Customer Relationship Management (CRM) effort designed to build loyalty and satisfaction among channel partners of a very large

information technology manufacturer. Surveys will be conducted in native language, and the questionnaire will contain both standard, global elements and questions customized for regional operations.

Dimensions will provide an optimal underlying architecture that makes you more effective and efficient in overcoming challenges associated with:

- Managing the matrix of questionnaire versions across region, language, wave (time) and data collection system
- Integrating multiple data collection modes and third-party software packages to provide efficient merging of data for fast, combined operational reporting and for extensive analytic use without incremental data preparation and conversions (this challenge alone can add tremendous operational cost using current approaches)
- Creating a reporting and analytic environment that can offer to each category of end user the information and tools appropriate to his or her mission – and facilitate the process of turning all this information into actionable insights.
- Providing ongoing reporting and direct feedback from the study which can be distributed throughout the organization

Second, consider a data mining project for a supermarket chain that combines behavioral information from a loyalty card program and volume data from point-of-sale systems with surveys conducted on Palm pilots and/or kiosks on the retail floor. Dimensions will make survey data from SPSS® or third-party data collection systems available to analytic tools such as Clementine, where it can be merged with other data streams and utilized to analyze and predict buying patterns. In this way, retail floor and shelf layout, item selection and clustering can be optimized to maximize high-margin and overall volume, and highly targeted promotion strategies can be evolved to increase customer value.

Moving to more operational issues; question/questionnaire databases, or libraries, have been built by a number of

research agencies and manufacturers to reap the benefits of standardization – in terms of measurement consistency and of process efficiency. In this context, the data model provides a single place in which to store – for any particular question – specifications and text information needed for:

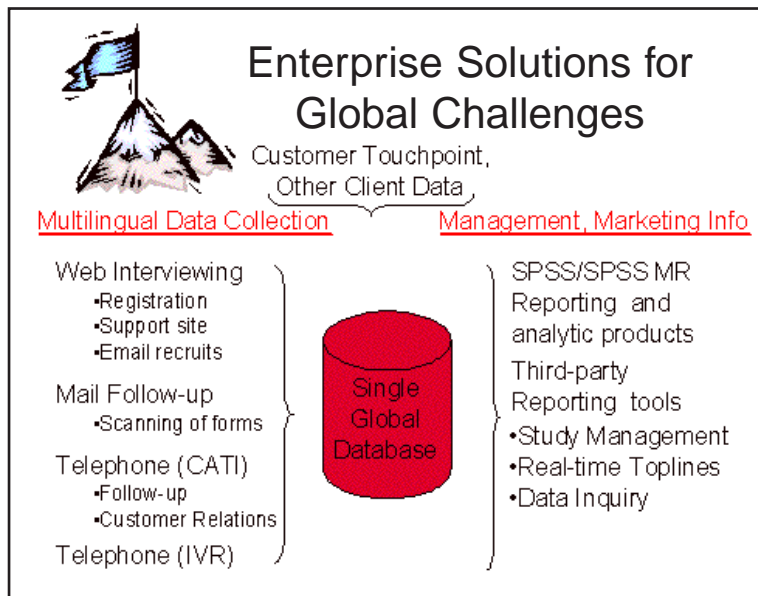
- All data collection contexts (e.g. Web, wireless, paper/scanning, multiple CATI systems)
- All languages
- All versions (e.g. for tracking studies)
- All analytic contexts (e.g. tabulation instructions, Quanvert labels)

Finally, Dimensions can also help research agencies to better understand – and as a result, more efficiently manage – their operations through Rapid Process Management Reporting. One field and tab organization, for example, is using the Dimensions architecture to integrate data from interviewing log files, interviewer time clock logs, an employee timesheet database and an interviewing scheduling system. The data model makes these data available to a batch SPSS program that generates management reports on:

- Project costs
- Profitability snapshots
- Early warning alerts for projects that appear to be in trouble

Additional SPSS modules are to be deployed to assist in interviewer scheduling and productivity analysis, improving facility utilization. This firm is generating more effective

management information, more rapidly, and distributing it more effectively via their intranet thanks to the data model and the Dimensions architecture.



### About SPSS Inc.

SPSS Inc. [NASDAQ: SPSS] is the world's leading provider of predictive analytics software and solutions. The company's predictive

analytics technology connects data to effective action by drawing reliable conclusions about current conditions and future events. More than 250,000 commercial, academic and public sector organizations rely on SPSS technology to help increase revenue, reduce costs, improve processes and detect and prevent fraud. Founded in 1968, SPSS is headquartered in Chicago, Illinois. To learn more, please visit [www.spss.com](http://www.spss.com). For SPSS office locations and telephone numbers, go to [www.spss.com/worldwide](http://www.spss.com/worldwide).



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