

Survey Data Collection Technologies



RTI International designs and conducts research surveys that deliver high-quality data to clients in the public and private sectors. Our researchers use advanced data collection systems and techniques to complete accurate, cost-effective surveys of all sizes around the world. RTI's survey specialists have advanced systems in place to meet federally mandated standards on privacy, confidentiality, and data security.

Depth and Innovation

RTI survey developers provide programming support for multiple modes of data collection, including

- Audio computer-assisted self-interviewing (ACASI)
- Computer audio-recorded interviewing (CARI)
- Computer-assisted personal interviewing (CAPI)
- Computer-assisted telephone interviewing (CATI)
- Computer-assisted web interviewing (CAWI)
- Interactive voice response (IVR)
- Mobile data collection

At RTI, we pride ourselves on being innovators in survey technology. We created ACASI, which won us an Innovators Award from the American Association for Public Opinion Research. RTI is also a pioneer in conducting surveys through text messaging, which has revolutionized data collection in remote parts of the world.

RTI offers our clients outstanding technological aids for managing quality, including electronic tools that support human oversight of operations. We routinely use CARI to assess the authenticity and quality of field and telephone interviews. We also added CARI to RTI's mobile field survey software (Mobile FS) for data collection systems

on tablets and smartphones. Mobile FS can record photos and geotags to confirm the location and surroundings at the time of data collection.

RTI provides systems that meet National Institute of Standards and Technology controls for data security. We routinely implement our key data collection systems—including Nirvana, Blaise, Voxco, and Hatteras—within a FIPS-Moderate environment.

Survey Systems

Nirvana. RTI's proprietary survey management system, Nirvana, is an innovative and a fully integrated information technology system developed to manage all aspects of survey data collection. A standardized common database seamlessly shares data about sample members across subsystems in a sophisticated, structured approach that streamlines critical case management functions and reduces costs.

Voxco. Voxco—a commercial off-the-shelf, multimodal survey data collection system—is RTI's go-to solution for CATI, CAWI, and mixed-mode (telephone-web) surveys. Voxco computer-assisted survey instruments are programmed once and implemented across CATI or web modes. The Voxco system's innovative predictive dialer reduces CATI data collection costs.

Blaise® Software from Statistics Netherlands. RTI staff members have developed and supported computer-assisted interviewing (CAI) instruments in this internationally recognized survey software for more than 20 years. Blaise is primarily used for CAPI studies that (1) have complex instruments with nested loops and rosters and (2) require ACASI for sensitive questions and CARI for enhanced quality control.

Hatteras™. A web-based CAI system developed at RTI, Hatteras allows instrument designers and programmers to work collaboratively to develop or edit survey instruments. Hatteras supports multimode (CATI/CAPI/CAWI) data collection efforts, offers responsive device detection for the web, and is also useful for non-survey applications (e.g., medical records abstraction that requires nonlinear navigation through the data collection instrument).

Mobile FS. RTI developed Mobile FS—a powerful platform that allows users to conduct field surveys using Android tablets, smartphones, and other mobile devices. It can be adapted for use in household interviewing, establishment and vendor surveys, hospital/clinic settings, and environmental data collection. With Mobile FS, a field interviewer can complete a range of activities on one highly functional device. A limited version of Mobile FS is available for iOS devices as well.

Interactive Intelligence I3. Our call center's converged messaging system supports IVR and routes incoming calls and outgoing telephone surveys, giving RTI the greatest number of options for survey modes and management. Supervisory tools support both live and CARI monitoring.

Scannable Surveys. RTI supports traditional paper surveys with automated data collection and processing (e.g., automatic coding, machine editing, and scanning/optical character recognition).

Systems for Restricted Environments. RTI offers a combination of technologies for very restrictive environments such as those found in prisons. We pair the Simple Survey System (designed for touch-screens) with ACASI (for privacy) to create a safe and usable tool for data collection from low-literacy populations.

Project Highlights

National Survey on Drug Use and Health (NSDUH) (Substance Abuse and Mental Health Services Administration, 1999–present). NSDUH field interviewers equipped with both handheld devices and laptops visit approximately 250,000 households annually to complete 70,000 interviews. This effort requires a complex IT infrastructure, including specialized data collection hardware and software, data transmission systems, data processing, analysis and control software, approximately 50 large relational databases, and 2 terabytes of RAID data file storage.

Medical Expenditure Panel Survey: Medical Provider Component (MEPS: MPC, 2013–present). MEPS: MPC supports the mission of the Agency for Healthcare Research and Quality. MEPS data describe health services used by Americans, frequency and cost of use, and how these services are paid for. Each year, the survey collects data from a nationally representative subsample of households that participated in the previous year's National Health Interview Survey. Data are used to impute estimates of medical expenditures nationwide.

Global Adult Tobacco Survey (GATS) (Centers for Disease Control and Prevention, 2007–present). GATS collects data on tobacco use in countries with the highest smoking rates and tracks these countries' progress in implementing tobacco-free programs over time. The GATS survey system developed by RTI has been used to collect data in more than 360,000 household surveys in more than 40 languages across 36 countries. Through in-country trainings, RTI has implemented and managed global computing and support operations.

More Information

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