Synchronos® Enterprise MDM Platform

for rapid implementation of a high-quality, high-volume Master Data Management platform

Innovative Systems, Inc.

Executive Summary

Accurate, complete, real-time customer data drives successful companies. It is at the heart of customer-focused business initiatives in marketing, sales, service, and risk management. Today, staying ahead of the competition requires more advanced use of customer information, on both the operational and analytical sides of the business, including more sophisticated extended relationship management and multiple household definitions.

The Synchronos MDM platform provides an integration framework that enables your organization to meet and exceed these advanced enterprise master data management requirements. It is built to handle high processing volumes and to easily scale as future needs develop. Synchronos MDM allows you to:

- *Achieve accurate, full-volume production MDM – typically within six months*

- *De-risk your MDM initiative using a proven rapid implementation methodology*

- *Uncover issues, understand time, cost, and resource requirements, and determine end-state data quality prior to starting the implementation*

- *Quickly analyze 100% of your data set to build an accurate prototype for business users to validate*

- *Establish superior accuracy through massive knowledgebases and cognitive-based matching methodology*

- *Confidently establish complete "golden record" profiles – incorporating an accurate full data set – for your initial production implementation*

- *Build and maintain extended relationships – automatically*

- *Establish and utilize multiple household definitions within the same MDM implementation*

- *Safely access accurate customer information from anywhere*

- *Start with enterprise customer and easily extend into other domains, leveraging existing work and infrastructure*

- *Maintain the performance and integrity of the MDM implementation as your organization scales*

- *Jumpstart or quickly advance your associated Data Governance efforts through our "Partnership Model"*

Proven Implementation Methodology Provides Rapid, Accurate Enterprise MDM

Implementing MDM is a journey. In a typical journey, one normally knows both the starting and ending points before planning the best route. In MDM, an organization often does not know the starting point in terms of data. There may be some sampling and analysis efforts, but the organization often doesn't have a solid, complete picture. And, the organization often doesn't know the endpoint in terms of the accuracy definitions and thresholds they will need to support the business – or if they will be able to achieve those in a reasonable timeframe.

ISI uses an implementation methodology that is well proven across hundreds of customer implementations and includes robust diagnostic and analysis technologies that use your organization's entire data set. It allows you to de-risk the implementation project by uncovering potential issues early in the process. It does this through prototyping the implementation across the organization's entire customer base; identifying the timeframes and resource requirements required to implement MDM; and pinpointing the MDM data quality relative to planned uses of the MDM data initially and over time, along with the corresponding business-driven accuracy thresholds.

The result is that our clients know – before starting the implementation – the expected timeframes, costs, and resource requirements, as well as the resulting data quality that will be achieved, ensuring that business requirements will be met. By being fully informed about the starting and ending states of the data before beginning the implementation, our clients produce realistic, solid justification for sponsoring and funding the project.

Data Governance Approach Leverages Existing Accountability and Resources to Support Effective MDM Implementation

Most organizations view data governance as a complex, time-intensive, and expensive program that adds unnecessary bureaucracy to business processes and substantial additional responsibilities to personnel. ISI takes a different approach that leverages the value of existing personnel and processes within the organization.

ISI's data governance approach recognizes that data governance is already taking place in most organizations, though often in an informal

and ineffective manner. It focuses on complementing the organization by formalizing current levels of accountability and addressing any lapses that may exist in order to minimize expense and time, and by fitting within the existing work culture of the organization. Expectations are set by helping business areas recognize and articulate the activities that they cannot perform because the organization's data will not support those activities.

Individuals are identified with and acknowledged in roles associated with their existing relationship to the data as a way of recognizing their importance and impact on data found throughout the organization. Job titles do not change, and most responsibilities will remain the same as the data governance programs become more formalized. In addition, instead of having one data steward associated with each type of data, numerous people with an association to the data will act as data stewards and will be held formally accountable for how they use the data.

Through formalized discipline, accountability, and involvement, organizations apply ISI's data governance approach to existing workflows and processes.

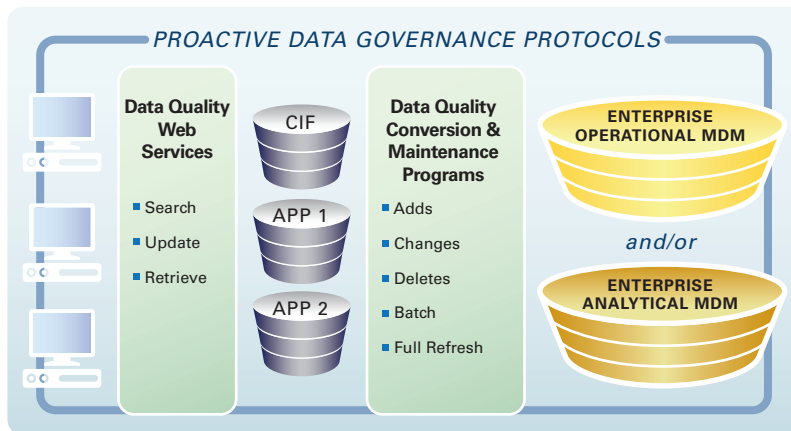## Full-Volume Diagnostics, Analysis, and Implementation Planning

Synchronos MDM provides business-friendly profiling and robust data discovery functionality that enable your organization to access and analyze 100% of your data set and rapidly build accurate implementation specifications. This ability to quickly prototype the entire implementation for business user validation – and identify issues early in the process before any code is written – provides the critical information needed to produce an effective implementation plan. This approach also allows your organization's full-volume data set to be confidently loaded for the initial population of the MDM repository, enabling the accurate representation of customer, household, and extended relationship profiles across all product lines from the start. And, Synchronos' built-in collaboration capability and business glossary allow team members to work synergistically, minimizing rework and enabling efficient use of resources.

Advanced, Extendable MDM Model

The Synchronos enterprise architecture is open and is based on a relational data model derived from ISI's hundreds of Customer Information File design engagements. The data model is optimized for fast, efficient management of customer information across the enterprise. The platform's open architecture is fully scalable and provides near total flexibility and adaptability, enabling you to leverage your investments in existing applications and providing insurance against system obsolescence. Synchronos easily allows your organization to track history and lineage, as well as manage hierarchies. The Synchronos architecture also allows your organization to easily extend into other domains beyond the customer domain – including prospects, suppliers, employees, agents, products, accounts, locations, etc. – and all on a single platform. Having multiple domains in one MDM platform enables your organization to understand issues across domains.

Synchronos' 360° customer profiles also go far beyond traditional models whose objective is simply to link a customer to all of their products. Our customer model reveals valuable information about a customer's extended relationships, identifying all of a customer's products, plus all other customers (business as well as individual) who have a connection to that customer, whether by family, employment, location, or other association – plus all *those* connected customers' products. In fact, Synchronos maintains up to 65,000 different types of customer-to-customer relationships. Organizational, product, and other hierarchies are also easily maintained within the Synchronos environment. And, unlike other MDM solutions, Synchronos can automatically build and maintain extended relationships – and then leverage them as though your organization knew all of its customers personally.

In addition, your organization does not need to be constrained by having a single view of "household" because Synchronos supports multiple household definitions. This PurposeView™ capability enables each department and function to define "household" in the way that best meets its unique business needs. To further enrich your customer profiles, you can also add proprietary Influence Value Indicators™ that enable you to identify the potential strength of the influence between connected customers.

Typical Synchronos® Enterprise MDM Implementation

Synchronos® Enterprise MDM

Industrial-Strength Data Quality Tools and Processes

At the heart of successful MDM implementations is the ability to accurately cleanse, parse, standardize, match, and link customer information to build a complete "golden record" for each customer. The Synchronos platform's superior profiling, discovery, and data quality toolsets and methodologies are fully integrated with the platform and are designed to meet the highest data quality standards for building golden records within operational and analytical MDM systems. They feature a cognitive-based architecture and massive knowledgebases, which produce significantly higher accuracy and dramatically reduce the amount of manual review time and cost required for the MDM implementation and ongoing maintenance processes compared to alternative approaches.

The unrivaled power and precision of Synchronos' data integration and data quality management capabilities are driven by ISI's proprietary multi-million-word knowledgebases of words, patterns, and word phrases compiled while performing thousands of data integrations and data quality engagements worldwide. These knowledgebases — by far the most extensive available — contain every word and misspelling ISI has processed over more than four decades. Comparing your data against these knowledgebases enables you to quickly parse, standardize and classify name and address elements, including determining organization vs. individual and male vs. female. The data elements are then assigned to the correct fields, populating — or updating — your database with clean, accurate records. These capabilities produce far better and faster results than traditional table-driven systems, which require new entries to be discovered and added to the tables in an expensive, iterative fashion. This iterative process often takes many months or years to complete — and still doesn't produce the level of quality delivered by ISI's knowledgebases.

Synchronos' unique ability to identify duplicates and networks of connections among customers is based on ISI's intelligent "cognitive-based" matching methodology, which has been proven by our clients to be more accurate and reliable than deterministic or probabilistic (a.k.a. weighted field or scoring) methodologies and other matching systems. Instead of simply counting the number of duplicates, ISI's matching methodology compares two potential duplicates field-by-field, to determine all the ways the records may be different. Then, with an unprecedented degree of control and accuracy, it assigns a "rank" to the records based on rules written to meet your organization's specific business needs. In this way, our methodology finds duplicates other methodologies miss and reveals incorrectly-matched duplicates to be unique customer records. This powerful methodology also enables linking to identify extended, non-intuitive relationships among customers that other methodologies can't recognize.

MDM is one of those business initiatives that should rise to the top *of the priority list of things to be funded and implemented for the simple reason that accurate customer information is at the heart of most of a business's initiatives. But when it can take so long — often years — to get these types of initiatives into production, and then to ensure that the large volume of data in them is very accurate, many organizations wonder if they will ever get accurate Customer MDM in place.*

From our experience, successful MDM means the rapid implementation of accurate, full-volume, operational master data, accomplished in the most cost-effective manner possible. While it's been common for MDM implementations to take years to be implemented in production with full customer volumes, what we mean by rapid implementation is starting from scratch and establishing an enterprise customer system that works in production in less than six months. We don't mean a relatively small subset of data as a proof of concept or a reference MDM system that contains lookup tables for common entries, but rather the enterprise's entire operational customer record set — being used in full production.

Rapid implementation is important because it provides for short-term payback, which helps the MDM project achieve sponsorship and funding. The resulting accuracy of data is just as important. How does ISI define accurate customer information? From hundreds of audits on existing customer systems and from cross-industry data management benchmark studies, we've found that the level of quality needed to support various business areas, especially the operational ones, is 98.5% — 99% or higher accuracy. This level of accuracy is necessary to successfully support the typical customer-based functions within a business: Marketing, Sales, Service, Risk Management, etc. Of course, specific business-driven accuracy thresholds (at the field level) should be determined as part of the initial diagnostic and analysis phase.

While accurate customer information is critical for the operational areas of business, it is just as important for the analytical areas. Customer information is a key feed (if not the main feed) into data warehouses and data marts, and if your organization doesn't ensure the highest level of quality in the operational MDM system, then it will be making critical business decisions based on the wrong information.

Synchronos® Enterprise MDM

It is also important to consider the aspect of exception review for the cleansing, duplicate identification, and linking phases. This is often the most underestimated component when organizations build an implementation plan, but is necessary to achieve the quality levels required to meet operational business needs. Traditional data quality systems have either no automated review component or a very rudimentary one. Instead, ISI has engineered specific-purpose, high-productivity review workbench systems that allow review of exceptions up to eight times faster than alternative methods.

High-performance Processes Enable Full-Volume Initial Load and Efficient Ongoing Updates

The underlying architecture of the data model and the profiling and data quality tools and processes is built to easily handle high-volume operational and analytical customer MDM requirements. For that reason, Synchronos is able to load full volumes for the initial MDM load. This is critical because organizations that use only certain segments (such as high-value customers) for the initial load risk having a significant volume of customer and household profiles that are incomplete or missing because some of the information is in unloaded segments. It is our efficient tools, processes, and architecture that enable full-volume production MDM implementations – typically in less than six months. Synchronos also provides efficient processes for ongoing searches, updates, and other operations against the full data set to ensure that user performance expectations are met.

Information Availability with Full Security

Your organization's business and technical users can safely access and use accurate customer information from anywhere. Synchronos provides flexible and customizable options to make information available, ranging from the main Synchronos HTML5 user interface, to customized mobile apps, to your organization's existing customer interfaces. No matter the access method, the platform's robust security model uses the latest encryption routines to protect your organization's data. Synchronos also provides the flexibility to brand and modify the workflow of the user interfaces to enable maximum productivity.

Finally, the platform provides a rich dashboard and reporting interface with drilldown and custom reporting capabilities.

Leverage Existing Technology

Synchronos builds upon and leverages existing technology. It enables a shared enterprise customer view without requiring individual applications to adapt their own customer definitions and rules. ISI recommends that your organization start with a co-existence approach and move to a centralized approach over time as justified by your organization's business needs. The Synchronos data model, data quality software, and surrounding processes will support both and other approaches, but starting with a co-existence approach is critical to ensure a rapid return on investment in your MDM implementation. And if you choose, your organization's existing Extract-Transformation-Load (ETL) technology can be leveraged in conjunction with the Synchronos platform. ISI's approach is also much less risky than those of others because our profiling/discovery and initial load processes become repeatable and allow new sources to be quickly and accurately integrated, and your organization can apply controls to the application sources over time in a phased manner. In addition, your ability to extend to other domains allows you to leverage existing work and infrastructure.

Efficiently Maintain High Quality Over Time

ISI provides the best-practice components, processes, and methodologies to ensure that the quality of the customer MDM environment is efficiently maintained over time. Synchronos allows your organization to leverage the abundant metadata and other information derived from the analysis and discovery phase to implement data quality controls that are relevant for your organization's business needs. Data governance controls are applied across the organization to ensure that real-time, incremental, and batch points of entry are protected. The platform provides a common business glossary that is an important component of these efforts. ISI's approach helps ensure performance and scalability and the ability to maintain the integrity of the MDM over very large volumes of customer records in production – typically tens of millions of records or higher.