


Maximizing the Currency of Customer Data across the Enterprise



Leveraging Maestro master data management and Dynamics CRM to realize the full potential of customer relationships



In order to fully leverage the value of customer-related data, that data must be up-to-date, accurate, complete and consistent across all enterprise systems. CRM solutions such as Microsoft Dynamics CRM can provide a powerful and highly sophisticated platform for organizing, automating and streamlining the sales and marketing business processes that nurture customer satisfaction and loyalty. But CRM systems are not the only enterprise systems that consume and contribute to customer information, or drive customer interactions. All enterprise systems, along with the CRM system, must draw from the same “master” customer record in order to maintain consistent customer service levels across the organization and maximize the benefit of customer-related processes at every level. For Dynamics CRM users, this can best be accomplished by using Maestro Adapter for Dynamics CRM to link customer-related master entities, and all of their defining attributes, into a master data management (MDM) solution.



Customer relationship management (CRM) has become an essential element in business management. Customers are more knowledgeable and informed, and demand higher service levels and more consistent interactions with the companies they buy from. At the same time, with the growing sophistication of available channels and technologies for amassing customer information, organizations have a wealth of data to fuel high-gain customer exchanges. In this business environment, CRM solutions such as Microsoft Dynamics CRM can provide a powerful and highly sophisticated platform for organizing, automating and streamlining the sales and marketing business processes that nurture customer satisfaction and loyalty.

CRM systems are designed to support outward-facing sales and marketing related processes; as a result, they are good at storing information specifically related to sales and marketing interactions, and provide user interfaces tailored to performing these types of activities. But CRM systems are not the only enterprise systems that consume and contribute to customer information, or drive customer interactions. These other enterprise systems may use the data more to support internal processes – such as order processing and fulfillment, supply chain and logistics management, and manufacturing to order – and need different information about the customer than that required for the sales and marketing function. For these processes, customer-related information around pricing and contracts is as important as the customer record itself. Where the sales organization views the customer through the lens of purchasing patterns, decision makers and budget timelines, the billing system (or multiple billing systems, if the customer buys from multiple divisions of the company) sees the same customer as a purchasing entity at a specific bill-to address, and the order processing system sees specific ship-to addresses and special delivery

You might need MDM...

You should know that CRM systems are **not** designed to solve the following business challenges:

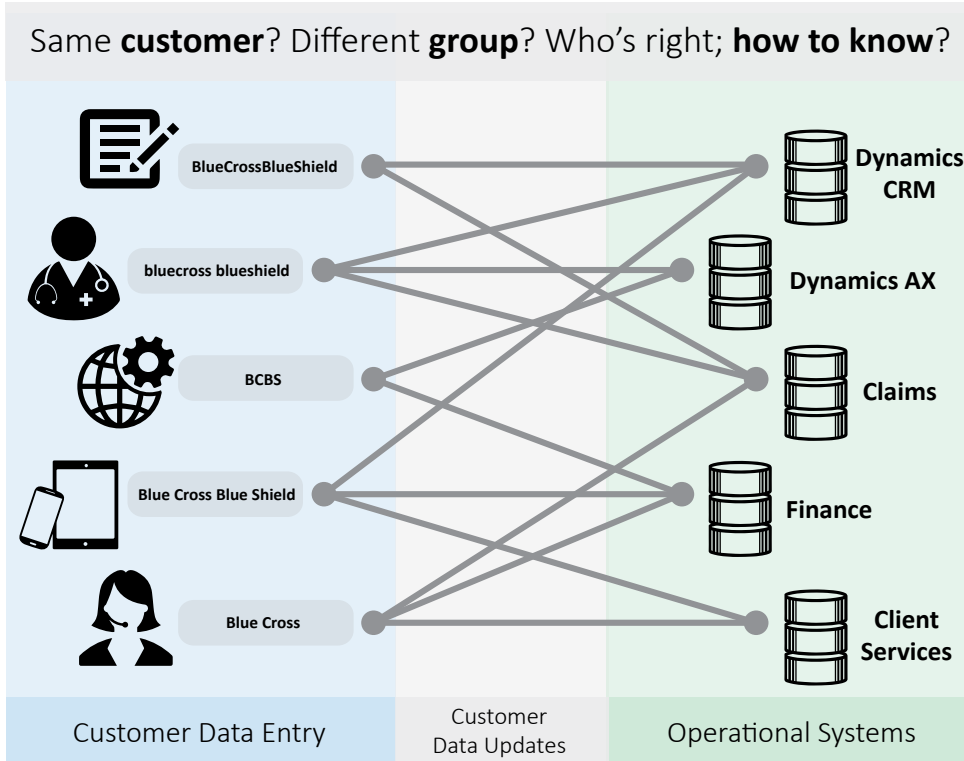
If you can't...

- ...**readily populate a new system** with customer data that you know is complete, accurate and clean; *(Band, 2010)*
- ...**ensure customer data quality** and consistency across functions, systems and business units; *(Band, 2010)*
- ...**produce and maintain a single, reliable view** of customer “truth” (master customer record); *(Honig, 2013)*
- ...**reliably eliminate data redundancy** – within CRM, and between CRM and other enterprise systems; *(Davey, 2011)*
- ...**view customer data hierarchically** and with historical views to support business intelligence; *(Wolter & Haselden, 2006)*
- ...**easily integrate customer data** with other relevant data, e.g., products, contracts, pricing, 3rd-party data; *(Liyakasa, 2012)*
- ...**effectively integrate and de-duplicate** customer data during mergers/acquisitions; *(Liyakasa, 2012)*

...then you need MDM to augment your CRM system.

This paper explains why, and provides guidance on evaluating the best MDM solution for solving these data management problems.

requirements. All of these enterprise systems, along with the CRM system, must draw from the same “master” customer record in order to maintain consistent customer service levels across the organization and maximize the benefit of customer-related processes at every level. For Dynamics CRM users, this can best be accomplished by using Maestro Adapter for Dynamics CRM to link customer-related master entities, and all of their defining attributes, into a master data management (MDM) solution.



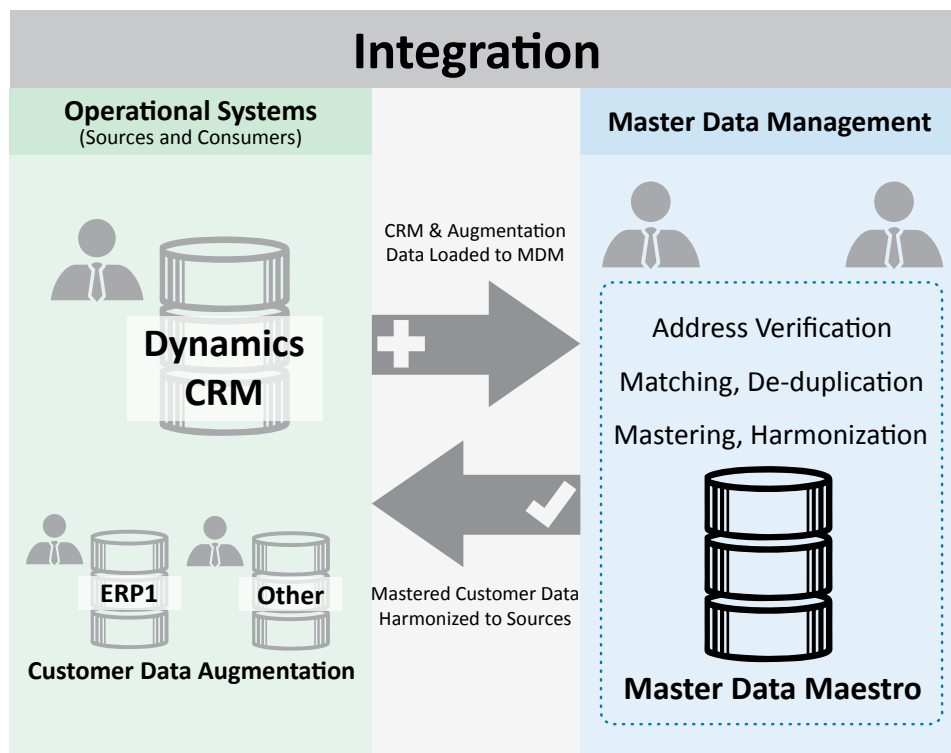
All enterprise systems that work with customer data need to work from the latest, most complete and accurate view of the customer – a single, consistent view that includes all of the necessary attributes to inform customer-related functions across the organization.

Master Data Maestro’s Role in the Dynamics CRM Environment

There are many benefits to using Maestro to master customer data for use in Dynamics CRM and other organizational systems. Maestro Adapter for Dynamics CRM was specifically created to deliver powerful data stewardship and data quality capabilities to customers deploying Dynamics CRM, and to support the rapid transfer of data from Dynamics CRM into Master Data Services (MDS). Maestro enables companies to leverage existing investments and skill sets, staying within the Microsoft technology stack, with all layers of the solution using Windows Communication Framework and SQL Server.

Get it Clean

Initial CRM implementations often require the combination of data from multiple sources, whether prior customer management applications, home-grown applications, or sales members' contact lists. Ensuring that the data loaded into the CRM system is consistent, accurate and de-duplicated can lower total cost of ownership (TCO) of the system, and simplify later integration, as in the case of mergers and acquisitions. The bigger and more widely distributed the data, the more complex the challenge, and the bigger the value gained in getting a "clean start". This means getting the data right to begin with, and then physically connecting and integrating the data with the CRM system.



With the Maestro Adapter for Dynamics CRM, the Maestro MDM solution allows organizations to quickly accumulate the superset of customer data from all sources, cleanse and standardize addresses and phone numbers, and master those records into a set of unique and clean accounts and contacts to load into the Dynamics CRM system.

This process may be employed:

- For rapid implementation of a new CRM instance.
- When integrating new systems, where initial and incremental data need to be reconciled, such as in cases of company mergers and acquisitions.
- As new customer accounts are acquired or terminated.
- As new customer interactions change or augment customer data.

Loading the data into MDS

In order to load data from multiple systems into MDS, an assessment of the fields within each source must be completed to determine whether each provides externally valuable information about the record. For each field, we need to determine if a new attribute in MDS is necessary in order to effectively store the information. The goal is to be as efficient as possible without losing any data integrity in this process. The next step is to identify the source system of each record transferred into the master data management system, and store the key from the source system for each record. These keys are unique identifiers that allow the system to keep track of records that have been loaded, and help to synchronize information going forward.

Adding value with Maestro

Once all of the source data has been loaded into MDS, the real value of the Maestro server can be realized. Address correction and record matching allow us to cleanse and de-duplicate the records. After the records have been successfully matched, survivorship and harmonization provide the most complete and verified dataset to the Dynamics CRM system.

Direct, codeless systems integration

Profisee's Master Data Maestro leverages the Master Data Services (MDS) base platform delivered by Microsoft as part of SQL Server, to provide a seamless enterprise-level MDM platform. Maestro then delivers de-duplicated data back to one or more CRM instances, and provides the tie between other enterprise systems that use customer data.

The Maestro Adapter for Dynamics CRM gives users the ability to integrate their Dynamics CRM instances directly into a Maestro MDM Server for cleaning, de-duplicating and mastering, without the need for a data bus.* And, since the integration can be performed without coding, companies eliminate the need for lengthy IT projects or expensive consulting services. Systems integrators make a nice living coding integration projects, but coding leads to risks – risks in correct interpretation of requirements, risks of incorrect coding, risks in testing. A codeless integration, on the other hand, provides the same benefits of Dynamics CRM: The user – who is most familiar with functional requirements – takes control and can easily change field mappings without the need for any coding whatsoever.

In addition to lowering risk and improving system acceptance and results, this “codeless” integration reduces time-to-production and significantly lowers up-front implementation costs. As a result, companies realize faster time-to-value and lower maintenance overhead.

*If a company already has a data bus, Maestro can leverage it, but for most companies, direct codeless integration is key.

Data Quality

To ensure the best matches possible, Maestro includes capabilities for address correction and standardization prior to running matching strategies. These capabilities provide global address validation, completion and geocoding, and enable users to build and save address standardization strategies based on desired fields and confidence threshold, for batch validation or checking addresses individually on-the-fly. Additionally, subscriptions for enhanced data services for mail-to locations (suite/apartment data), contact name, email domain, and telephone validation are available for North American addresses.

Once all of the data elements have been standardized, matching strategies can be developed to find any duplicate records. For matching, Maestro employs a fuzzy logic algorithm that is built from scratch specifically for master data applications. The Maestro matching engine enables user-customizable strategies that execute quickly, without coding or scripting. Developed through a dedicated multi-year research project, the engine works with any entity, any set of attributes, and can be layered to support complex scenarios.¹

Golden Record Management

After all matches have been found within the dataset, a single complete master record – the “Golden Record” – can be determined for the matched customer. User-defined survivorship rules and processes determine which attributes of matched records from multiple sources will be used to create the Golden Record. For example, the customer record from your call center system may have the most reliable and up-to-date phone information, but the most accurate ship-to address information may reside in your order processing system. Using the survivorship rules within Maestro, each field is evaluated to determine the best possible value for the master record. Rules can be built to ensure that all of the data elements required for the new system are complete before loading the de-duplicated, mastered records into the Dynamics CRM system.

Harmonization is the complimentary process of pushing data from a Golden Record back out to source system records, for ultimate operational MDM capability. The combination of mastering and harmonization forms a closed-loop process referred to as “survivorship”, which takes data values from designated authoritative systems and propagates those values to other systems that need them. For example, a central corporate ERP instance may hold the authoritative credit hold indicator for customer records, which needs to be pushed out to other ERP instances to block new orders. A change in a customer’s zip code may need to be distributed to all related address records across multiple billing systems.

¹For more information on the Maestro matching process, please refer to “Beyond Matching: Enterprise Golden Record Management”, by Val Lovicz, Profisee Group, Inc., available for download at www.profisee.com.

Extra value:

Reduce address verification overhead

If you are paying for an address-verification service, the Maestro MDM solution will give you a way to preserve all of the information returned from a single call, even if you are not saving all of the information in Dynamics CRM, by allowing you to merge it into your master data solution as a third party data source. In this way, you can go back for information you did not originally use, without incurring the overhead of another call to the address verification service.

For example, when entering a new customer address into Dynamics CRM, your input form may only contain five fields:

Address 1	Two Northwinds Center
Address 2	2520 Northwinds Parkway
City	Alpharetta
State	GA
Zip	30008

If you send a lookup request to the address verification service during edit of this form, the response will only include information for the fields entered, for example, correcting the zip code:

Address 1	Two Northwinds Center
Address 2	2520 Northwinds Parkway
City	Alpharetta
State	GA
Zip	30008 30009

But the service may also provide information on...

- Carrier/routing for mail delivery
- Geocodes, for demographic or other information within a specific radius
- Result codes – why was a change returned?
- Is the address deliverable?
- What information is missing (e.g., suite number)?
- Parsed data, such as street name; unit/box number

...information that may be needed by other systems, such as the ERP system, and for which another call must be made to the service, with another charge incurred – for information that was “left on the table” by the CRM form.

By submitting the address validation request through Maestro, companies get more information, at a lower cost per customer, and reduce the resource overhead required to develop multiple interfaces for enterprise systems that use the address validation service.

Keep it Clean

Once customer data has been mastered and harmonized across Dynamics CRM and other source systems, the harmonization and data sharing rules established within Maestro are used to keep the customer data in sync. This synchronization can be accomplished on a resource-efficient timed batch basis (often nightly), or near real-time, with Maestro's event management system.

Batch processing

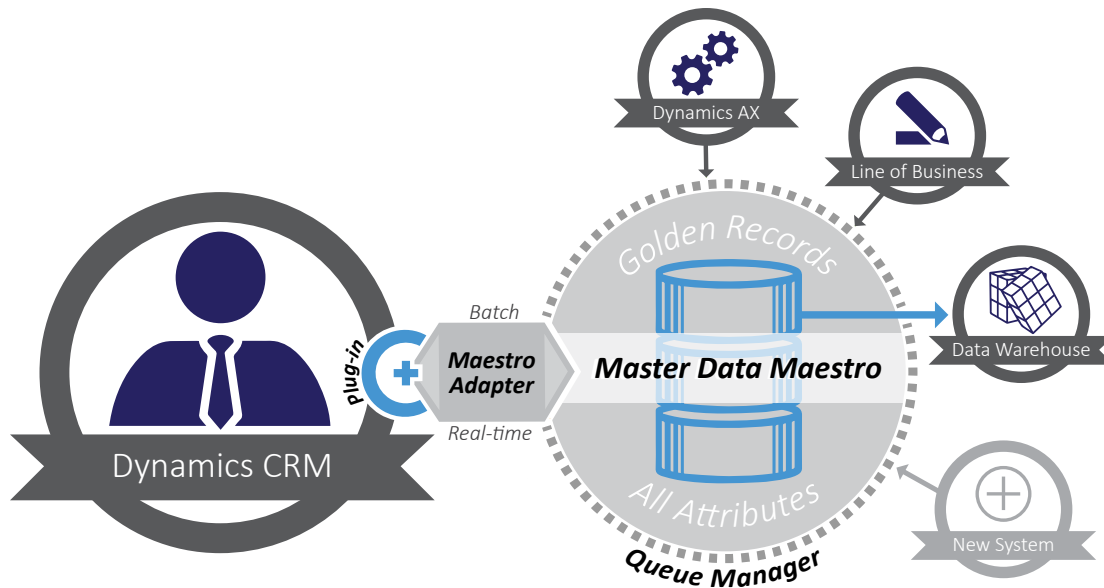
All Dynamics CRM Adapter functions have been enabled for command line execution, so organizations can leverage the Microsoft scheduler feature to trigger batch data loads between Dynamics CRM and Maestro. This allows organizations to update large chunks of CRM data on a nightly basis. For instance, product managers might work through the day, creating new products and developing new pricing levels, either within the Maestro system or some other downstream system. At midnight (or another off-peak processing time), scripts could be run that would trigger approved products and their related pricing data to be transferred into the Dynamics CRM system, ready to inform sales efforts the following business day.

Real-Time Integration

In order to support real-time integration between Maestro MDM and Dynamics CRM systems, Maestro wraps the entire MDM solution with the event triggering, management and message queues necessary to support enterprise-grade MDM with Dynamics CRM. Profisee is unique among vendors, including Microsoft, in providing this wrapper for MDS, and using all standard Microsoft architectural components to deliver real-time integration. No other solution offers this enterprise-grade approach to MDM and systems integration, delivered and proven in real-world implementations.

Profisee's event management solutions track changes made within either the Dynamics CRM system or Maestro. With Maestro event management, any subscribed changes create a message in the designated Microsoft message queue created for each system that is connected to Maestro. The message will detail the entity changed and identify all relevant context, as well as the type of change that has occurred. In this way, system users can understand the business implications of the changes, and respond accordingly.

Maestro leverages the Dynamics CRM event processing subsystem to monitor changes within the Dynamics CRM system. Depending on the implementation, local or online, a plug-in can be registered that will write to the message queue a single record providing information on the monitored change whenever the specified conditions are met, for any entity within the CRM system. The plug-ins are triggered by changes post-event, ensuring that any changes to the CRM system have been successful before triggering the record to the message queue.



In addition, Maestro has built-in event messaging that allows any member change within the Maestro system to trigger a message in the Maestro message queue. The message will provide the member identifier for the record changed, the type of change (create, update, delete), and any of the attributes that changed in the system.

Queue Manager

The Maestro queue manager monitors all Maestro system related queues, and triggers any subscribing process that is listening for that specific message type. Each Maestro Dynamics CRM Adapter ships with a compatible subscriber to consume messages from any of the Maestro managed queues, based on a pre-configured file that details what attributes to transfer between each system. The queue manager also supports a pluggable interface to allow any subscriber that is created to consume messages. Each subscriber can be configured to trigger based on the entity and attribute combinations that triggered creation of the message.

Fueling CRM Success with Master Data Management

In order to be successful in achieving the primary goals of CRM, the system needs to work from a single, “true” view of the customer that informs all of the company’s interactions with that customer. This will enable sales and marketing interactions that fully leverage all of the most current intelligence available about the customer to improve outcomes, and to raise the consistency and quality of customer service interactions. And, since the CRM system is not the only enterprise system that uses customer data, sharing that master customer view across the organization will result in better interactions across the full lifecycle of the customer relationship, from order processing through shipping, billing and ongoing support.

For Dynamics CRM users, this holy grail of maximizing customer data value end-to-end can best be accomplished using the Dynamics CRM Adapter for Master Data Maestro, adding powerful data stewardship and data quality capabilities to Dynamics CRM deployments. The use of Maestro will speed initial Dynamics CRM implementations and improve ongoing maintenance and integration by assuring that the data loaded into the CRM system – whether from other CRM instances, enterprise systems, or third party sources – is complete, consistent, accurate and de-duplicated. Maestro’s data harmonization ensures changes in source systems are appropriately applied to the master customer record in the CRM system, and guides the process of pushing updated CRM data back out to source system records, providing complete operational MDM capability. In this way, the value of best-in-class customer relationship processes can have maximum organizational impact, and produce the highest return on the CRM investment.

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