

Launching Your CDI Program: The Pitch, The Plan, The People



The writer Octavio Paz once said that “Wisdom lies neither in fixity nor in change, but in the dialectic between the two.” Customer Data Integration (CDI) has one foot in established systems – those that need newly-robust customer data on demand – and the other in a new paradigm of automated data management and purpose-built data integration. Marrying incumbent technologies, available skill sets, and business processes with a new paradigm of “integration on demand” means that launching a CDI effort is different, arguably more specialized, than other strategic IT programs. In this paper, we describe the critical success factors to consider when starting up CDI, involving larger master data management (MDM) principles, but delivering business value incrementally and quickly.

We’ll define CDI as the automation of the integration, reconciliation and management of customer reference data *from* enterprise systems and *to* enterprise systems. In other words, CDI solutions are purpose-built to package specialized data cleansing, rigorously-defined business rules, formalized policy-making (also known as governance), and on-going stewardship to create a single source of the truth about customer data as a service to the enterprise at-large.

In this paper, we’ll describe the lifecycle of pre-facto CDI, which can be divided into three main phases:

- The Pitch
- The Planning
- The People

The ability to deconstruct the early stages¹ of a CDI effort into these three components has been a boon to companies who need integrated, well-managed and continually propagated customer data to a range of systems and users. Success in these areas virtually ensures a useful and sustainable CDI program.

The Pitch

The first hurdle most companies face is making the “internal pitch” for CDI. Selling CDI internally is hard work, not because the concept of integrated and propagated customer data is so hard to grasp, but because so many people in your company think it’s already being done. As with any new technology or emerging trend, those with a stake in the status quo will be its saboteurs. This makes the CDI pitch that much more daunting: not only do you have to convince those in charge that CDI adds value, you have to make a case for why it’s different than what’s already been done.

The conundrum here is that CDI is sophisticated, specialized, and new – but stressing these facts can be risky. CDI not only changes fundamental technology principles, it has organizational implications as well. Thus, we discourage the “all the truth and nothing but the truth” approach that some technology early-adopters fall back on when pitching a new technology.

¹ Readers who are interested in the “Process” piece of CDI should see Chapter 5 of our book, *Customer Data Integration: Reaching a Single Version of the Truth* (John Wiley & Sons, 2006). Called, “Customer Data Integration is Different: A CDI Development Framework,” the chapter details the discrete steps in CDI development and describes how CDI implementation differs from the development processes of other business-focused IT programs.

Formative pitches often sounded like:

We need CDI, and we'll be at risk if we don't adopt it soon. Our existing systems can't cut the mustard – they're all operating on different versions of the data. Our data warehouse was designed for analytics, our ODS is read-only, our ERP system has no customer detail, and our operational applications don't talk to one another, let alone share data. Oh, and we need to put some governance mechanisms in place, meaning we need time from executives. And by the way, we need to hire skills we don't have. And auditing our current systems would be a good idea...

Such statements – while probably painfully true in your organization – are simply too scary for most managers to hear, especially managers who might have participated in adopting one of the legacy technologies that might already integrate some data. The pseudo-pitch above is rife with the subtext that that change and investment will be huge. All too often, that means your CDI program will be dead in the water.

A better approach is to begin with the business impact of not having CDI. Have your facts straight, be unemotional and be ready to produce proof. Here are some statements that are non-threatening yet provocative. Each has proven very effective in getting management's attention.

"12 percent of our accounts don't have an associated account holder name. And we're using this data in our financial reporting. Some day, someone's going to notice and ask questions."

"Our Siebel system was built to recognize a customer as anyone with an address. Our SAP system considers a customer to be anyone with a shipping address. And we have 72 other systems with their own business rules. The one that wins is the one that generated the data most recently. Which one are you using?"

"Of our 568,000 business customers, 23,452 of the monthly statements were returned by the post office. This represents \$1.6 million in delayed or lost revenue."

"Of our 43 core systems, 35 process some kind of customer data. Because these systems don't share data, 22 frequently create new customer IDs for existing customers."

"We're spending \$1.8 million a year with an outside vendor who gets, matches, and sends back OUR customer data."

Providing these facts is not fear-mongering. Instead, you need to understand and measure existing business problems that affect (or are affected by) inaccurate, unsynchronized, duplicated, missing or contradictory customer data. And if your company is like most companies, those problems proliferate.

Who's Pitching, Who's Catching?

The ideal scenario is for a business person – perhaps someone in marketing all too familiar with the erosion of revenues caused by duplicate mailings and badly-managed Do Not Solicit data – to meet with C-level executives to discuss the value of a centralized, managed, integrated and propagated customer data repository. He'll paint a picture of why the company needs more emphasis around the management and deployment of harmonized customer data. The VP will lean forward in his chair, and the chief marketing officer will write him a check on the spot.

We've seen this approach work well for end-user focused efforts like BI. Indeed, we've participated in plenty of them. But the truth about CDI is that is a fairly complex combination of platform, algorithmic processing and data propagation that business people are likely to confuse with similar messages around CRM and data warehousing.

Indeed, successful CDI efforts usually begin on the technology side with:

- A savvy IT architect who sees a better way
- Lead developers under pressure to deploy more data faster to a greater range of operational systems
- A CIO or IT executive who's analyzed skyrocketing development costs and understands the role of point-to-point data integration in the mix.

Best-practice CDI projects start with an ambitious vision, a realistic understanding of the business impact of customer data integration and a small controlled project that delivers value quickly.

CDI programs, like any master data management (MDM) initiative, walk a fine line between establishing a vision and quick delivery. CDI's complexity and "infrastructure" flavor make it difficult to "demo." By the same token, a few well-researched improvement suggestions might be all you need to convince those who hold the purse strings to fund an initial pilot. We've seen many CDI pilots last eight weeks or less, and deliver clean, reconciled customer data out of the gate.

Preparing the Pitch: Tips to Remember

Here is a list of "Dos and Don'ts" to remember before gathering potential stakeholders and embarking on your internal PR for CDI:

Do frame the business problem alongside the technology. Because CDI solutions are sophisticated, their proponents often come across as more enamored with the technology than with the business problems at hand. CDI is innovative, but innovation alone won't encourage management to loosen its purse strings. Make sure there's a problem to solve.

Do enlist your technologists. While gaining the support of business stakeholders is currently *en vogue* for many new IT initiatives, with CDI you might have an automatic fan base by proselytizing the ability to automate data integration across applications. This promises to save developers, testers, IT data stewards and architects countless hours of work – and rework – and promises to offer potentially significant cost savings.

Don't advocate expensive homegrown development. This is one of the issues CDI alleviates: the proliferation of custom code that needs to be updated and maintained, often by an entire team of people. When we spoke to her about her company's pioneering CDI solution, Nancy Lehrer, lead architect at Amgen, told us, "Buying a tool to leverage advance cleansing and matching capabilities made all the difference." Avoid re-inventing the wheel.

The Planning

Planning a CDI project is ideally a mixture of top-down and bottom-up approaches. The winning CDI implementations we've seen have involved an elegant fusion of strategic alignment with quick delivery of the small, controlled project we described above. Unless your company has a single, certified list of customers that can be propagated to on-line systems on-demand, CDI will be new, and so will the steps taken to ensure its success.

But that doesn't mean you shouldn't leverage existing processes, skills, and technologies in order to get it done.

Customer Data and Beyond! Building Your MDM Masterplan

Baseline Consulting delivers a service called an MDM Masterplan™. Although CDI doesn't mandate exhaustive analysis and consensus building, it's not unusual that CDI is the first step in an overall MDM program. In fact, where MDM is concerned, CDI is a typical onramp, confirmed by 2006 research by The Aberdeen Group:

As most organizations begin MDM deployment with a single application of MDM...and then refine the approach before moving towards full enterprise deployment, we believe it is premature to benchmark MDM performance against CDM [Customer Data Management].²

Aberdeen's research found that "above-average and average performers were twice as likely as below-average performers to use CDI and data quality tools." Clearly, the early-adopters of new enterprise data management programs are starting with small, controlled projects and showing value quickly, while integrating this value into a larger plan over time. With CDI and MDM, companies are heeding the adage to "start small, think big." We tell our clients to "plan MDM, but do CDI."

MDM addresses the challenge of inconsistent definitions of conceptual entities (like customer, product, or location) across various organizational silos. So it doesn't hurt to do a little up-front planning when it comes to understanding how to maintain, manage, integrate, and deploy master data.

Questions to Ask in MDM Planning

A good MDM plan will address a range of management, operational and deployment issues, acknowledging challenges with reference data within and across organizations. A valid and sustainable MDM planning effort should include the following considerations:

² Leslie Ament, Aberdeen Group. Customer Intelligence Benchmark Series, "Customer Data Management: How Leaders Attain Tangible ROI," June 2006. See www.aberdeen.com.

- Which business processes are most affected due to the lack of reconciled information, and which have the highest promise of improvement? For instance, if sales people from different regions access their customer lists from different “customer information files,” they risk cannibalizing product sales, over-communicating with customers and prospects, and sending duplicate or irrelevant messages.
- Do we have an inventory of master data sources? Are there acknowledged “authoritative sources” for key master data, including customer data? Understanding the potential sources of master data is an important step in MDM planning.
- Is there “situational” master data in place today? Certain organizations might already be relying on master data services that work well in their domains. Such master data sources might be insufficient in their current form at an enterprise level. Conversely, they may be extendable across a larger portion of the enterprise. In other instances, there will be multiple versions of the same master data, a common phenomenon that drives most MDM efforts.
- Is there an incumbent data quality tool or effort in place today? Is there profiling and monitoring taking place? Many companies have established processes and proven tools to fix data at different stages in its lifecycle. Such a program can become part of a larger and more formal MDM program that institutionalizes business rules for data definition, standardization, and matching.
- Where is our metadata? Even companies with mature MDM visions and clear CDI execution strategies might nevertheless be unaware of the state of their metadata, let alone its potential sources.
- Where are our data security policies? Is there data access authorization at the system level? At the data level? At the metadata level? Who establishes these policies and where are they documented?
- How mature is our data stewardship? We’ve written extensively about data stewardship³, but for our purposes here, early-adopter companies have both business data stewards – who understand the business usage of key data elements and enforce key policies – and technical data stewards – who monitor data at its various sources and ensure that it’s correctly and consistently available to the users and systems that need it.
- Is there data governance in place? We discuss data governance at length elsewhere,⁴ but let’s define it here as the framework and mechanisms for setting data policies and priorities on behalf of the enterprise. Data governance establishes the internal control mechanisms for defining, maintaining, and deploying master data.

³ See Dyché and Levy, “The Next Wave of Data Management,” *Intelligent Enterprise*, July 2006, as well as Chapter 6, “Who Owns the Data Anyway?: Data Governance, Data Management, and Data Stewardship,” *Customer Data Integration: Reaching a Single Version of the Truth* (John Wiley & Sons, 2006).

⁴ Ibid. See also Dyché, “The Evolution of a Data Czar,” published by BI Network, August 2006. <http://www.b-eye-network.com/view/3172>

- What business capabilities are we sacrificing by not understanding, defining, managing, reconciling and integrating master data? Many companies are unable to comply with governmental and legislative mandates like Sarbanes-Oxley or the Information Security Accountability Act. Others are simply not as agile in their competitive analysis, forecasting, marketing, or performance management efforts because of inaccurate, missing or latent data.

Answering these questions will not only clue you in to the scope and breadth of your company's master data challenges, they're also likely to help pinpoint which master data subject area contributes to the most business pain. With the prevalence of customer-focused strategies, investments in CRM and target marketing programs, and executive-level attention to customer satisfaction and retention, all roads usually point to the customer master.

Starting MDM with CDI

Sometimes clients will ask us to develop an MDM future-state technical architecture or map all their business processes to key master data. These companies are usually IT innovators who need to understand their data in the context of in-progress projects and strategic initiatives. They see IT as a strategic advantage and have the budget to adopt new technologies as they promise business benefits. We happily engage on these projects.

But many of our clients can't afford the money or time of an analysis-intensive approach to MDM planning. They need a faster, more deliberate set of steps to communicate MDM value and launch a subsequent tactical project or proof-of-concept. For these companies, we usually practice a more deliberate MDM planning process, represented at a high level in the sequence below:

1. Identify operational applications with a discrete need for master data
2. List business capabilities that are imperiled or hindered without master data
 - a. Cross-functional data needs
 - b. Common decision making obstacles
 - c. Business issues due to conflicting data
 - d. Barriers to strategy fulfillment
3. Identify and prioritize data requirements based upon:
 - a. Availability of subject area content
 - b. Maturity of business decision-making methods
 - c. Business value of data
4. Review current data management practices and gaps
 - a. Differentiate enterprise- from application-based data management activities
 - b. Review data management fits into the corporate SDLC

- c. Pinpoint subject areas and elements lacking in data management oversight
5. Create an MDM Masterplan™ that details:
- a. Prioritized operational applications as candidates for MDM
 - b. Key MDM subject areas
 - c. Existing data management practices and gaps
 - d. Data governance opportunities
 - e. The initial subject area for implementation (e.g., customer)
 - f. An initial “small, controlled project”

This sequence is a healthy – but not lengthy – mixture of top-down and bottom-up planning. Each step in the approach has its own structure and deliverables. MDM planning should support the company’s strategies, business processes, and culture, and should not aim to change them.

By creating a robust, improvement-driven, reality-based MDM plan, you provide the company with a vision for moving forward while at the same time offering tactical and prioritized work efforts that will propel you forward to MDM maturity.

The vast majority of the plans we develop culminate in the definition and timeline for an initial Small, Controlled Project (SCP) that establishes rules for, integrates, and automates the reconciliation of an initial set of customer master data. By its definition it is CDI, but if done right, it ultimately also represents the initial MDM pilot project on behalf of the enterprise:

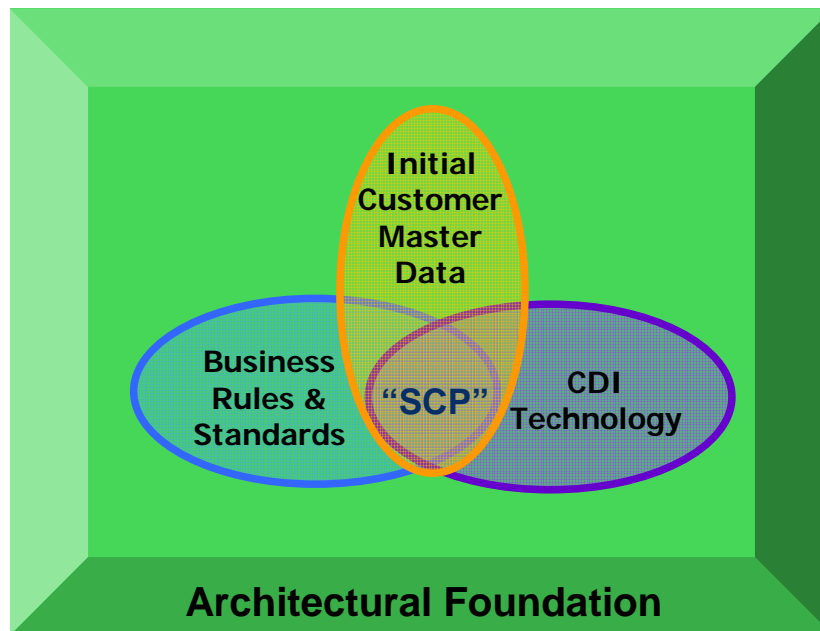


Figure 1 - The structure of Small, Controlled Project (SCP).

As the initial CDI pilot takes shape, companies with a long-term goal of MDM will begin formulating the architectural foundation for master data as an enterprise service to a range of systems and applications that need it. In this way, they not only drive incremental business benefits, but gradual high-impact efficiencies as well.

Preparing the Plan: Tips to Remember

Here is a list of “Dos and Don’ts” to remember before and during MDM planning:

Do introduce a structured approach to MDM planning. Simply earmarking general activities like “business process analysis” and then going underground to deconstruct business processes – and map them back to key reference data – might not be enough to sustain the support of management.

Do communicate MDM planning timelines and deliverables. Stakeholders – both on the business and IT side – need to understand the endgame of MDM planning, and that means clear timelines, milestones, and deliverables. It also means ensuring that the output of MDM planning is used as input into the initial CDI development effort.

Don’t go overboard with executive workshops, user interviews, or facilitated requirements sessions. MDM is less about end-users than it is about IT infrastructure. Moreover, these activities risk fostering the perception of large enterprise programs, ambitious budgets, and analysis paralysis – and could ultimately make a three-letter acronym a four-letter word.

The People

In the glory days of UCLA basketball – the sold-out games at Pauley Pavilion, the four undefeated seasons and ten NCAA championships, the alumni returning to campus for the first time in years – legendary Bruins coach John Wooden was at the center of the frenzy. In those days, and still today, people spent time studying his inimitable leadership style. He was a sober, spiritual man in touch with the game, and even more in touch with his players. Ultimately, Wooden’s leadership triumphs were less about his own coaching techniques and more about his ability to build and sustain a team. He got the most out of every player, and the whole became greater than the sum of its parts.

The great thing about coach Wooden was that he was willing to play by the rules and change them at the same time. Instead of analyzing opposing teams, he focused on his own team’s skills, teaching his players what they needed to know, and doing a stellar job at recruiting talent the team lacked.

MDM relies on the on an often-unfamiliar—or at least, unpracticed--premise that master data should be decoupled from the applications. This implies expertise not only on the business problems that need the data, but on the data itself, its systems of origin, and the potential technologies that can play a role in addressing those problems. The issues are varied, and so are the required skills. Which means you need a diverse set of talented players.

The Initial CDI Team

These days, corporate data owners are more aligned with physical servers than with master data definitions that span the enterprise. Data stewards (if they exist) are trying to convince their colleagues to share their data for the greater good, and leaders who really understand the game are hard to find.

Preparing for CDI means approaching the project one application at a time. Ultimately, a CDI hub can act as a service for dozens or even hundreds of applications. The eventual CDI implementation team might involve the skills of diverse professionals filling discrete and specialized roles, some full-time, some as-needed. These roles might include:

- CDI project manager
- Business data steward
- Business subject matter expert (SME)
- Source system data steward
- Business analyst
- Data analyst
- Data administrator
- Metadata administrator
- Data security manager
- Data quality manager
- CDI data administrator
- Data czar
- Data modeler
- IT architect

Some of these roles—for instance the business data steward, the business and data analysts, and metadata administrator, to name a few—are more “advisory.” They might already exist in your organization. Such functions are not dedicated to the CDI project, but are highly leverage-able, thereby ensuring that CDI is treated as a bona-fide enterprise effort.

If you’ve prioritized the work correctly, then the players in the initial MDM planning activity will have specific roles and be accountable for specific outcomes. During the planning phase of MDM and CDI, the following roles are the most critical:

CDI Project Manager

The project manager will identify resources, determine milestones, and pinpoint key participants in CDI planning. The project manager must have a solid background in enterprise systems, but at the same time understand the business need for customer master data. He should also understand and be able to articulate the value of ancillary MDM functions such as data governance, service oriented architecture (SOA) and CDI vendor solutions, and when they should be introduced into the conversation. In the CDI planning phase, the project manager’s job is to proselytize the value of the CDI project, communicate milestones and deliverables, and help choreograph important talent.

IT Data Steward

The role of IT data steward (a.k.a., source data steward) is critical, yet new in most companies. IT data stewards know the data in the individual source systems, how to access it, and the lineage and detail about that data. (The IT data steward is different than the business data steward, who functions as the point of accountability for data subject area or domain knowledge on behalf of a line of business or department.)

Not every potential data source will be involved in the initial CDI project. The balance is interacting with specific IT data stewards, while keeping source data owners not involved with the initial project aware of CDI progress and milestones. After all, with an incremental approach to MDM, source system owners who aren’t involved in the initial CDI effort will be called at some time to provide their data.

Operational Application Owners

The owners of operational applications are the best arbiters of which master data is important. They will understand the scope and usage of specific master data elements within their applications. Talking to the owners of operational applications, such as a billing or call center system, ensures an understanding of how data is used within a particular application.

These individuals will describe how data management standards, if they exist, are implemented within the operational applications. These conversations will in turn inform the decision about the initial small, controlled project and help prioritize which master data elements are most critical across the business.

CDI Development Team

If custom development is necessary to develop a CDI hub, instead of the purchase of a CDI tool, your development team will likely be experienced middleware and transaction systems developers who understand the migration of data between systems. Such team members are good resources to call upon whether or not you purchase a CDI toolset.

If you do indeed purchase a vendor solution for CDI, most of the work will involve CDI data administration, meaning that the “developers” function more as support staff to the developers of operational applications that need access to the CDI hub.

IT Systems Architects

The current technology infrastructure should support the movement of data between various systems, and no one is better to describe the inner workings of data migration technologies than IT architects. An IT architect can describe the system and application connectivity between platforms, as well as existing data migration and integration solutions. IT systems architects are also the go-to people for describing current thinking and implementation around SOA, and be key supporters of the concept of software-as-a-service, which describes CDI.

The planning of an MDM activity more closely resembles operational application planning than it does user-focused systems like data warehousing. The transactional and processing functions associated with CDI means that it ultimately touches both analytical and operational applications. Thus the individuals involved will need to understand data usage and processing of critical business applications. This means a heavy-duty roster of technical players.

Preparing the People: Tips to Remember

Here are the “Dos and Don’ts” to remember before looking within and outside the company for the best people to fill critical CDI roles:

Do stay in regular touch with the operational systems owners. Operational systems continually change, and the CDI team members should develop relationships with these stakeholders, ideally participating in the change management planning for those systems.

Do manage people’s expectations about the project. Help them understand that CDI is an evolution, not a revolution, and establishing an authoritative source of company data will happen in a deliberate and stepwise approach – unlike the way in which customer data sources proliferated in the first place!

Don't assemble an ad-hoc or sub-standard team. Your MDM program could end up being one of the most far-reaching initiatives the company has undertaken. The projects within MDM will be scrutinized, evaluated, and tested. People who see the CDI project as an exciting career move need to have already proven their worth or have experience delivering it elsewhere. This is not a job for anyone's B-players.

Conclusion

As companies realign their business processes, consider software-as-a-service models, and continue to loosely-couple specialized systems, process and terminology standards become ever more critical. What we've learned on many of our MDM projects is that data standards established in past enterprise systems development programs like ERP fail to apply outward to the rest of the enterprise.

Developing a comprehensive MDM plan that drives the tactics for delivering CDI is not only challenging, it's likely to represent a paradigm shift in many organizations. As most IT cultures embrace either pure "top down" or "bottom up" development styles, a good MDM plan that drives CDI will be an amalgam of the two. A well-wrought MDM plan means more than simply enlisting the right decision makers and providing a well-documented set of project activities. Likewise, an isolated master data proof-of-concept risks painting the CDI with light brush strokes.

MDM ensures that business processes can leverage standardized data across applications, systems, and organizations. By extending data standardization across the enterprise, companies are also expanding the business efficiencies and strategic benefits. And with CDI as a critical component of this infrastructure, companies are sure to make huge strides in both operations and innovation.

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