The Long and Winding Road from CDI to Data Governance

Thomas V. Carlock
VP Corporate Data Management
Tuesday, November 27, 2007
Agenda

✓ Introduction
✓ About CIT
✓ The Road to CDI Using Data Governance Light
✓ The Road to Full Data Governance
✓ What’s Working
✓ Lessons Learned
✓ Q&A
About CIT

We are the world’s largest independent commercial finance company, leveraging:

- a broad set of capital and advisory solutions
- a century of commitment to our customers’ success; and
- a deep understanding of the industries we serve

**Leadership in Key Markets**

- Equipment Lending and Leasing
- Vendor Finance
- Asset Based Lending
- Credit Protection/Factoring
- Small Business Administration Lending
- Aerospace and Rail Asset Leasing
- Broker Originated Home Equity Financing
- Student Lending

**Key Facts**

<table>
<thead>
<tr>
<th>Market Capitalization</th>
<th>$8.6B</th>
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<tbody>
<tr>
<td>Percentage of Non-US Business</td>
<td>21%</td>
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<tr>
<td>Countries with CIT Customers</td>
<td>52</td>
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<tr>
<td>Employees</td>
<td>7,000</td>
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<tr>
<td>Clients Worldwide</td>
<td>650,000</td>
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<td>Industries Served</td>
<td>30</td>
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<td>Offices</td>
<td>220</td>
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<td>Assets Under Management</td>
<td>$70B</td>
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<td>NYSE Symbol</td>
<td>CIT</td>
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<td>Fortune 500 Ranking</td>
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</table>
Like many large global companies, CIT data is distributed across multiple transaction processing systems.

CIT understands the value and importance of getting our hands around the consolidated data.

CIT recognizes the importance around having guidelines for visibility, sharing, privacy rules and usage of this data.

Variety Of Data Models

Duplication Of Customer And Address Information

Who are my customers?

What have they financed with us?

What services can I offer them?

Are we at risk anywhere?

CIT Business & IT Sponsored the CDI Project
The Road To CDI Using Data Governance Light

Developed a small data governance task force of senior business SME’s

Developed a strategy to achieve CDI and some data governance

Chose a few key Data Governance processes required to be successful

Data Governance Processes

Goals

Data consolidated in a single physical database

- Single consistent enterprise-wide customer data model
- Consolidated & standardized definitions of a customer

Consistent Data Management Pipeline

- Data quality and standards adhering to CIT’s rules
- Data can be enriched with external sources

The Customer Data Hub becomes the master data source for CIT Customer information

<table>
<thead>
<tr>
<th>Data Definitions, Standards &amp; Metrics</th>
<th>Data Profiling &amp; Stewardship</th>
<th>Data Transform &amp; Cleansing</th>
<th>Data Consolidation</th>
<th>Data Provisioning &amp; Sharing</th>
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<tr>
<td>Credit</td>
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<td>Finance</td>
<td>Legal</td>
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<td>AL</td>
<td>Fi-Serve</td>
<td>IL UK</td>
<td>IL Central</td>
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<td>IL Asia (2)</td>
<td>LALS</td>
<td>Whole Sale Australia</td>
<td>EDLGG Warehouse</td>
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<td>IL US Merged</td>
<td>ACAR</td>
<td>Loan IQ</td>
<td>Stucky</td>
<td>Data Scan</td>
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</tbody>
</table>

Customer Data Hub
Data Definition Process & Benefits

Benefits

- Clear business definitions with rules defined by business people
  - Easier to communicate corporate needs to local business teams
  - Easier to map corporate definitions to local business system fields
  - Easier to profile to understand potential data quality issues
Data Profiling Process & Benefits

1. We begin with locating the data values we want to use.

Define Data Values

Profile the Data Using a Data Profiling Tool

Data profiling gives us complete visibility into the quality and content of any data source. Through effective data profiling, we can uncover data anomalies by:

<p>| | | |</p>
<table>
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<th></th>
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</table>
We begin with locating the data values we want to use.

Data profiling gives us complete visibility into the quality and content of any data source. Through effective data profiling, we can uncover data anomalies by inspecting the true content, structure and relationship hidden within enterprise data sources.

Once we have completed the reviewing the data we write a report of our findings to be reviewed with the data owners of that source.

Based on the business feedback we will establish data quality targets. Identifying root causes of data problems and work with the business to seek resolution. Signing off will authorize us to go ahead to place it into the Corporate Data Warehouse.

Benefits

- A well defined business process ensured consistent steps to achieve profiling tasks
- The defined process allowed us to educate local business teams on profiling
  - Business understood why profiling was important
  - Business understood what was expected of them during this process
  - Business valued the results, embraced the process and is now actively involved
  - Data Stewardship is underway!
Data Consolidation Process & Benefits

3 Companies are actually a single customer!

Jones Inc. Jax $100K
Bob Jones Tempe $100K
The Jones Canada $150K

Jones Inc. $350K
Smith Co. $100K
Gorman Co. $200K
Gupta Inc. $300K
Chen & Co. $150K
Data Consolidation Process & Benefits

D&B Parent Child Trees + CIT Customer Data

**Global Ultimate**: highest ranking global member of a corporate family

**Domestic Ultimate**: highest ranking member of a corporate family within a country

**Parent**: any company that owns more than 50% of another company

**Subsidiary**: more than 50% owned by a Parent

**Headquarters**: any company having Branches or Divisions

**Branch**: secondary location or operation, not a separate legal entity

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**SGG Inc.**

**Party 1**

**Party 2 (UK)**

Subsidiary of Products Group Corp.
Clayco Inc. 12-000-0005

**Party 3 (US)**

Subsidiary of Products Group Corp.
Ceramico Inc. 14-000-0001

**Party 4 (Canada)**

Subsidiary of Products Group Corp.
Glazeco Inc. 13-000-0003

**Party 5**

Branch Of Clayco Inc. Clayco Storage Div. 17-000-0004

**Party 6**

Branch Of Clayco Inc. Clayco Refinery Div. 19-000-0002

**Party 7**

Subsidiary Of Ceramico Inc.
Ceramico Stores Inc. 15-333-3336

**Party 8**

Branch Of Glazeco Inc.
Glazeco Storage Div. 19-000-0000

**Party 9**

Branch Of Glazeco Inc.
Glazeco Refinery Div. 11-000-0007

**Party 10**

Branch Of Ceramico Inc.
Indusceramic 15-000-0009

**Party 11**

Branch Of Ceramico Inc.
Builderenic Inc. 16-000-0006

**Party 12**

Branch Of Ceramico Inc.
Ceramics North 13-333-3336

**Party 13**

Branch Of Ceramico Inc.
Ceramics South 14-444-4446

**Party 14**

Branch Of Ceramico Inc.
Ceramics West 11-111-1118

**Party 15**

Branch Of Ceramico Inc.
Ceramics East 12-222-2227

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**Jones Inc.**
Data Consolidation Process & Benefits

The single customer is a member of a larger organization!

Value
Assures
Love
Understanding
Executives
$ Continued Funding

Benefits
The CDI Project is delivering VALUE!

SGG Inc.
Corporate Headquarters

Gorman Co.
$200K (Branch)

Gupta Inc.
$300K (Branch)

Jones Inc.
$350K (Branch)

Chen & Co
$150K (Branch)

3 more Branches buy $30k

50 more Branches of Gupta Inc.

20 more Branches of Smith Co.

10 more Subsidiaries buy $20k

New Growth Opportunities

The single customer is a member of a larger organization!
To Summarize

• Developed Small Governance Task Force Using Business SME’s

• Developed a strategy to achieve CDI and some data governance

• Chose a few key Data Governance processes required to be successful
  ▪ Data Definition, Profiling & Stewardship

• Implemented the CDI project and delivered value in 9 months

• Results: Opportunity to make a case for a full data governance program
The Road To Full Governance

✔ Business Sponsors & Data Champions
✔ Selling the Program Strategy to Senior Management
✔ Selecting a Consulting Partner
✔ Understanding CIT’s Readiness Level
✔ Building Out of the Program
  ✔ Build the Organization
  ✔ Develop the Program Guide
  ✔ Develop the Processes
  ✔ Educate and Communicate
Identify an individual within CIT who has the delegated authority of the CEO to make things happen.

- Corporate Controller & CIO

Identify key people who have the knowledge, expertise and passion to become Data Champions for the program. (Culture Changing Agents)

- Requires a dedicated Business, Data Governance and IT lead.
- Report to the Sponsor(s)
- Dedicated, accountable and hands on visionaries and executors of the program
- Ensure the program is constantly visible
  - Volunteer to do presentations at all levels (IT, Mid Level & Senior Mgt., etc…)
  - Share information (portals, internal newsletter, blogs, etc…)
# The Road To Full Governance

Selling the Program Strategy to Senior Management

<table>
<thead>
<tr>
<th>Project</th>
<th>Project Managers</th>
<th>Business Analyst</th>
<th>ETL Programmers</th>
<th>Report Writers</th>
<th>General DBA Support</th>
<th>Database Modelers/Programmers</th>
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<th>Data Profiling</th>
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<th>OLAP BI Tool</th>
<th>Database Platform</th>
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<td>BO</td>
<td>Oracle BO</td>
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</table>

$2.1 million

$10.2 million

$10.2 million

4 Projects totaling $20.4 million

Europe

Canada

Latin America

US East

US West

Technology Teams

Customer Data

Financial Data

Relationship Data

Hierarchies

Project 1 | Project 2 | Project 3 | Project 4 | Project 1 | Project 2 | Project 3 |

<table>
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<td>Project 2</td>
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<tr>
<td>Project 3</td>
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<tr>
<td>Project 4</td>
<td>i</td>
<td>i</td>
<td>i</td>
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</table>

Project 1 | IEM | BO | Oracle BO | P

Project 2 | IEM | SQL | Hyperion |

Project 3 | IEM | Hyperion | Sbase SQL | Hyperion |

Project 4 | IEM BO CDH | IBM | Oracle BO | P
The Road To Full Governance
Selling the Program Strategy to Senior Management (cont.)

No Enterprise Data Management Strategy
  - No Data Governance

Inaccurate Data
  - Data duplication
  - Limited or no data quality control

Data Infrastructure Build Out Would Be Too Expensive
  - More expensive to build, maintain and extend

High cost to business units in productivity losses
  - Large amounts of time spent collecting data for manual integrated view
  - Large amounts of time spent reconciling disparate results and individual BU data with Corporate Finance

Business decisions made on incomplete view
  - Understanding of CIT’s position in industry or portfolio incomplete
  - Time from business event to actionable information not optimum
  - Wait time for critical IT projects lengthened and costs increased

What’s wrong with doing it this way?
New Approach: Treat Data as a Corporate Asset

- Build comprehensive data management platform and process
- Re-work data management component of in flight projects
- Build reporting on top of best practice infrastructure
- Establish a data governance organization
- Establish a dedicated data management group
- Socialize data management throughout the corporation

Advantages of comprehensive approach

- Less expensive to build
- Less expensive to operate
- Less expensive to extend
Why choose a consulting partner?

- Too difficult to go it alone
- Requires highly qualified professionals who bring context to the engagement
- Ensures a 3rd party opinion
- No need to reinvent the wheel

How do you choose the right partner?

Large Consulting Organizations vs. Small Consulting Organizations
3rd Party Company interviews verify that CIT wants data governance:

- “Break the silo approach. Get everyone on board to learn to share data.”
- “Can’t get back to the true source of the data; can only go as far back as the UDB. Legacy systems lack data quality and documentation.”
- “I am tired of having to go to 14 different people to get information. It’s frustrating!”
- “We need a single source of the truth (EDW). Need common reference data group.”
- “Would love to see standardized definitions where upon data can be pulled from one conformed data set.”
- “Create separate Data Governance department. It must be business driven, independent of systems management.”

CIT data governance maturity level is low across 11 data governance disciplines

- Fix: Build a Data Management Program Roadmap

CIT lacks methodology to support data governance projects

- Fix: Align the Program with the IT Governance/PMO methodology

CIT is project focused

- Our culture is to recreate the wheel
  - “Tons of manual effort and reentry of data.”
  - “Frustrated with lack of data management capabilities and the many ad hoc data requests. Frustrated with the reporting capabilities. Excessive lists of reports generated, many of which contain the same data elements. No horizontal collaboration and no rules for accessing data.”
- Fix: Change the culture from Project to Program through socialization, communication, center of excellences and data stewardship
The Road To Full Governance
The Data Governance Organization

The Program

Data Management Program – DMP

Data Governance Executive Sponsorship – DGES

Data Governance Steering Committee – DGSC

Data Governance Council – DGC & Sub Committees

The Program

Data Governance Organization

Corporate Data Warehouse

Data Marts

Meta Data

Business Team
- Data Quality
- Data Stewardship
- Data profiling
- Definitions, policies, & standards
- Master data & meta data management
- Acquisition
- Quality assurance
- Data Sharing
- Facilitate Council & Committee meetings

IT Team
- Corporate Data Warehouse design, build & operations
- Data Profiling
- Extract, transform, & load data
- Data error capture
- Data modeling
- Data provisioning
- Data marts

Operational Data

Project 1

Project 2

Project 3

Project Steering Committee

Data Management Team – DMT

Data Governance Steering Committee – DGSC

Data Governance Council – DGC & Sub Committees

The Road To Full Governance
The Data Governance Organization
Data Governance Program Guide

- Executive Summary
- Business Drivers
  - Vision and Mission Statements
  - Program Goals
  - Business Goals
  - Benefits
  - Risks
- Guiding Principles
  - Metadata
  - Architecture
  - Data Quality
  - Stewardship
  - Data Access and Delivery
  - Security, Privacy and Compliance
- Program Organization, Roles & Responsibilities
- Program Processes
- Architecture Components
- Roadmap Activities
Guiding Principle Sample

Other principles: Metadata, Architecture, Data Quality, Data Access and Delivery, Security, Privacy and Compliance

**Stewardship**

There will be a dedicated data steward group responsible for the data governance program with overall authority and accountability for strategic development, policy standards, and responsibility for coordination with other data stewards (business and IT) to manage compliance to policies for acquisition, quality, maintenance, etc. and disposal of enterprise data.

**Why**

- Data is a valuable corporate asset and needs to be actively managed to ensure that the information factory yields the single version of the truth.
- Accurate, complete, and timely data is needed to make sound business decisions and meet corporate goals.
- Stewards will provide leadership to drive to high quality data.
- Business involvement in treating data as a corporate asset will increase because the business community will play an active role (data control, knowledge-sharing, A business stewards).

**Current State**

- Results of the EM maturity assessment yield a ranking of 2.1 with a desire to move to a ranking of 3 at the end of 9 months and for 4 at the end of 12 months.
  - Anyone outside of the business unit would not know the quality of the data.
  - There is no partnership between IT and business on data projects.
  - “Let’s focus data owners to be data stewards – faster accountability across the organization.”
- Have dedicated stewards primarily focused on customer data and the definition of the information factory program.
- This group forms the foundation for the larger Enterprise program.
- The customer data stewards have developed a process for profiling and documenting business models and this is in use today.
- This process has uncovered data quality problems, business processes that conflict across business units.

**Desired State**

- Quality measures exist for common customer data.
- The consolidated customer hub forms the initial data store of the planned architecture and generating business value.
- Assisted in portfolio analysis to merger and acquisition.
- Facilitated matching of 3rd party data to provide true prospects to marketing.
- The data steward group is facilitating local data steward assignment and master reference data management discussions in a pilot mode.

**Desired State**

- The culture of CIT will change from a project orientation to a program orientation as it relates to data.
- System development projects will consider data governance activities in their planning, effort and resource estimates, and funding requirements.
- There will be a multi-tiered data steward organization that contains both centralized and decentralized data management.
- Dedicated business data steward group – establishes, manages and monitors the information factory program and coordinates all other participants.
- Data stewards – key business point people that identify knowledge workers as needed and provide signoff on detailed data policies and standards.
- Knowledge workers – business and technology people assigned by the council to deal with specific data issues on an as-needed basis.
- Local business data stewards – own the data, have the authority to update data and will be held accountable for correcting data quality issues.
- Local IT data stewards – responsible for ensuring application development adheres to data governance standards and policies.
- The dedicated data stewards will create standards, policies, and procedures for data governance and oversee the data life cycle and will ensure compliance with Enterprise data standards, policies, and procedures.
- Data definitions, calculations, normalizations, etc. will be validated and documented by the dedicated data stewards.
- The dedicated data stewards will establish data quality expectations, monitor performance relative to these expectations and ensure that appropriate actions are taken to remedy quality gaps.

**Tools**

- The dedicated data stewards will provide guidance on all aspects of data, including policies, definitions, uses, etc.
- Policies will be based upon committee of users (stewards) who are driven by business needs.
- All data elements, definitions, and values contained within the data information factory will be validated by the data stewards and signed-off by the council.
- Funding and budgets for the governance program will be appropriated by the governance council and executive sponsors.
- Will be managed and supported by the dedicated data stewards.

**Metrics**

- Number of data elements managed by data stewards.
- Quality of data managed by data stewards and level of data quality improvement over time.
- Number of active stewards in the business areas.
- Consistency among reports and systems.
- Reduction of development project timelines as the factory is built out.

**Property of the CIT Group Inc.**

19

19

20
The Road To Full Governance

Educate and Communicate

Communication Strategy
• Developed a communication plan
• Built a Program Portal
  ▪ Links to Program projects
  ▪ Links to key sites and information
  ▪ Link to common BI portal
• Extensive and well organized document libraries
• Advanced search capabilities
• Customized Content “My Portal”

Education Strategy
• Volunteer to present at business & IT meetings
• Meet in smaller groups, one on one
• Talk about Governance when appropriate
• Be prepared for Elevator Speeches

Future Features
• Have a “Google like” query engine for meta data
• Data Quality Metrics
• Dashboards
Governance organization is alive and active…
- Cross teams of business and IT folks are learning to talk the same language.
- Teams are defining and standardizing business data.
- 131 customer, contract, and dealer data elements governed.
- 32 master data lists are governed. Industry standards and CIT standards.
- 4 hierarchies are governed.
- Reviewing DQ cases and resolving problems at the local source via top-down approach.

Oracle Customer Hub delivering 360-degree view of customer data.
Governed data improved communication with local teams on data needs.
Data steward program is finding data anomalies and process problems during profiling.
Local teams understand data issues and are receptive to fixing data.
Business process issues are being reviewed.
Some people are starting to understand and accept governance.
The Road To Full Governance
Lessons Learned

- Get dedicated commitments from sponsor(s) and business champion.
- Governance takes more time than you expect.
- You can not do this alone… seek professional help!
- Governance must be a business driven program and not an IT project.
- Governance is not about building a data warehouse or a reporting solution.
- Very few people understand governance, they understand value.
- Very difficult to show business value while building out governance.
- You can not short cut governance (get sponsors, do assessment, build a program guide, develop the organization, assign data champions).
- Develop processes with clear roles & responsibilities and follow them. No matter what!
The Road To Full Governance
Lessons Learned

- No matter how prepared you think you are, you're never fully prepared for all the unexpected challenges. There are and will be plenty. Follow the process.

- If people can not be held accountable don't expect to get focused people, timely or accurate information.

- Nothing is perfect and there will always be changes. Accept this and minimize rework early by modifying the processes.

- Exceptions will be needed, document them and get them approved before allowing them to happen.

- Your data is bad regardless of what you or others think or say...

- You need patience, understanding and nerves of steel!!!

- If you believe, you can make this happen... it just takes time.
It's QUESTION TIME!!