

Mastering Data with ERwin Data Modeler

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Agenda: The Road to Data Quality

- Start Trusting Your Data
- Obstacles & Object Lessons
- Essentials
- The Data Quality Steps

Trusting Your Data

- Data is a company's greatest asset.
- Accenture survey shows 40% trust "gut" over BI.
- 61% say good data was not available.
- Data plus quality equals information.

Obstacles to Data Quality?

- People, Process or Software related...
 - All of the above.

Silver Bullets

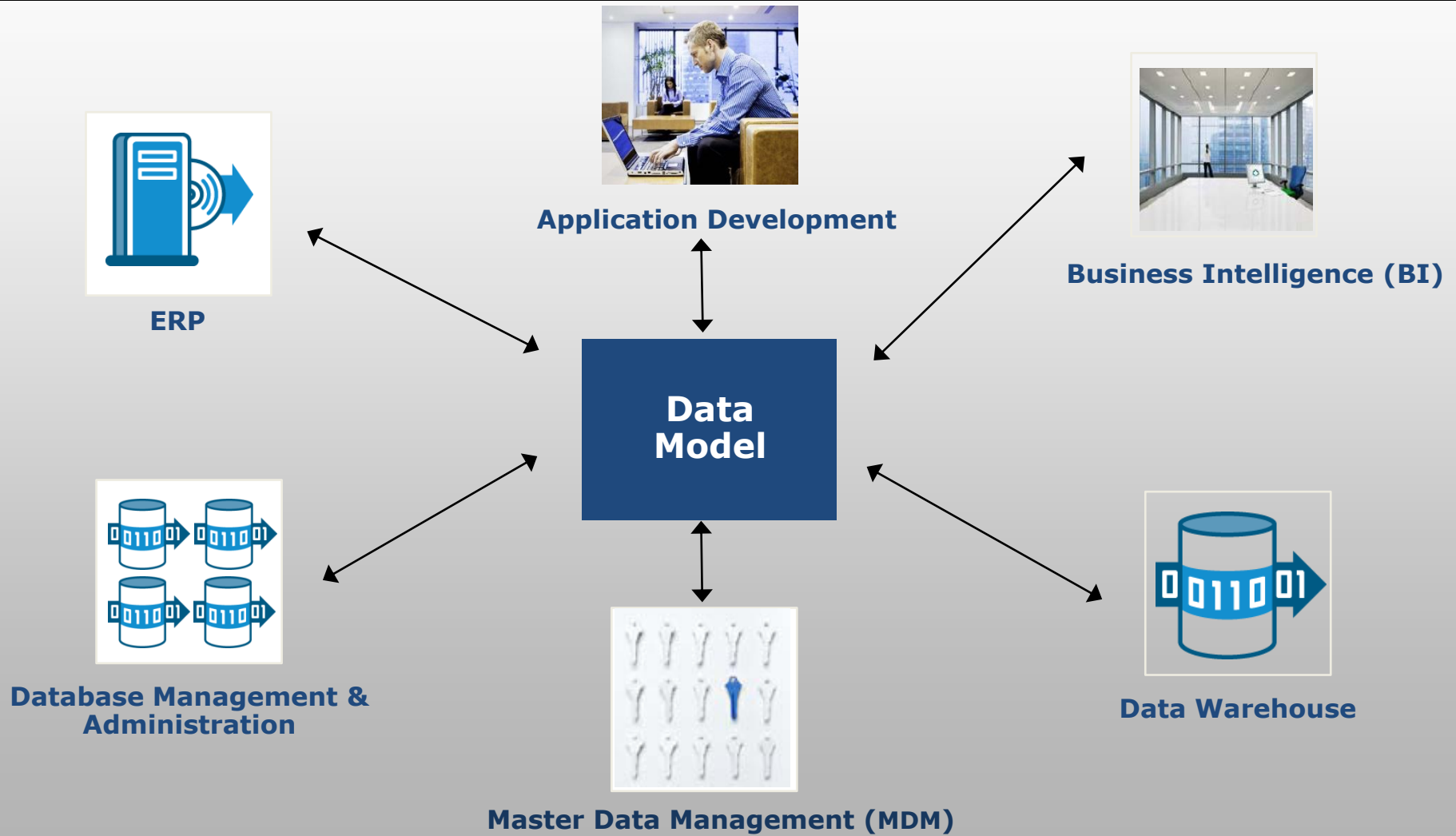
- Isn't the Data Warehouse/ERP solution supposed to be doing this?
 - Definitions can be context specific.
 - Delays taking ownership of your data.
- Nike/I2 CMS example.

Data Governance Essentials

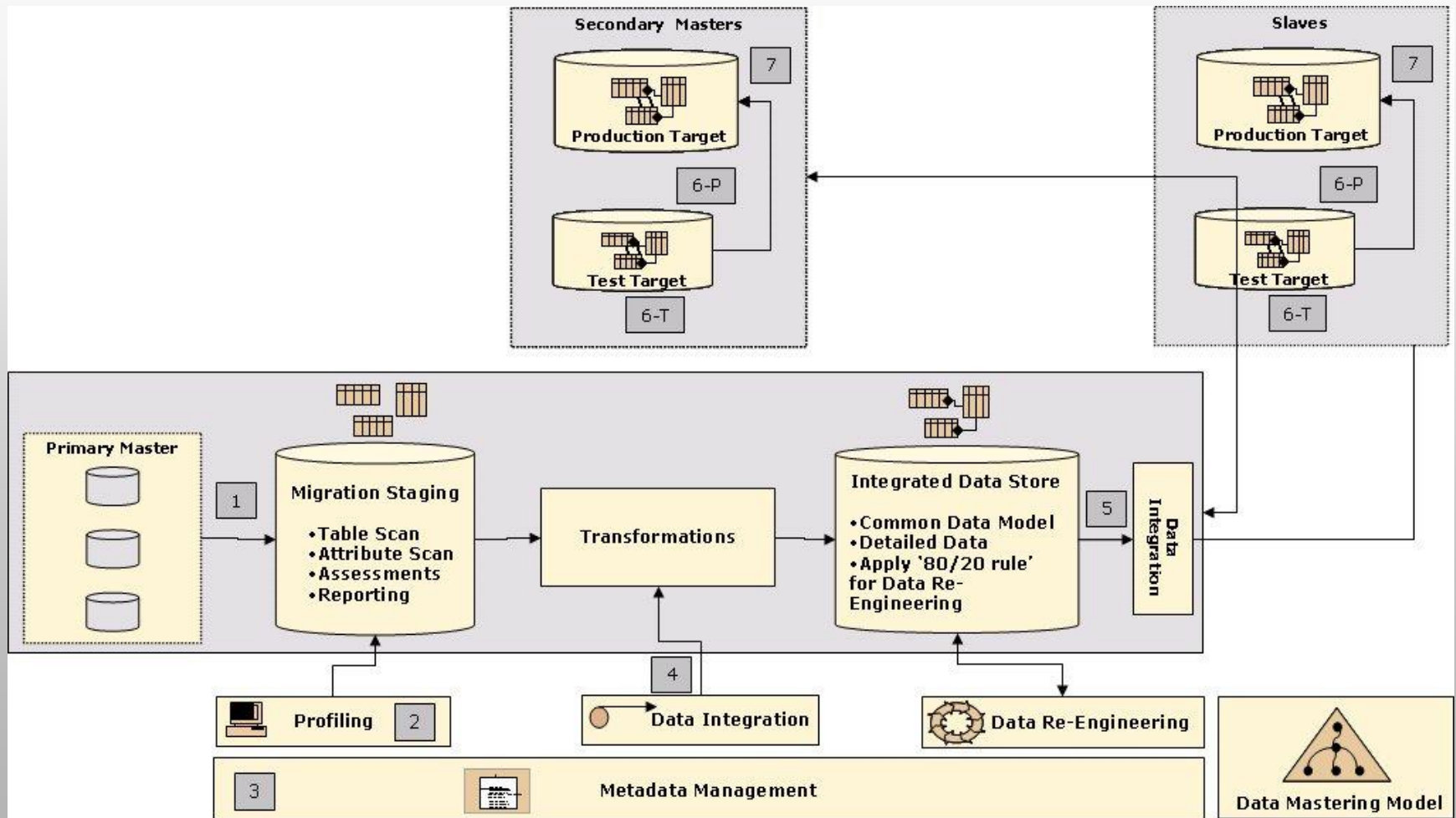
1. Metadata Standards
2. Collaboration
3. Structure
4. Policies and Standards
5. Cultural Change
6. Getting from “as is” to “to be”



Data Modeling as the Hub



1 – Defining Metadata Standards



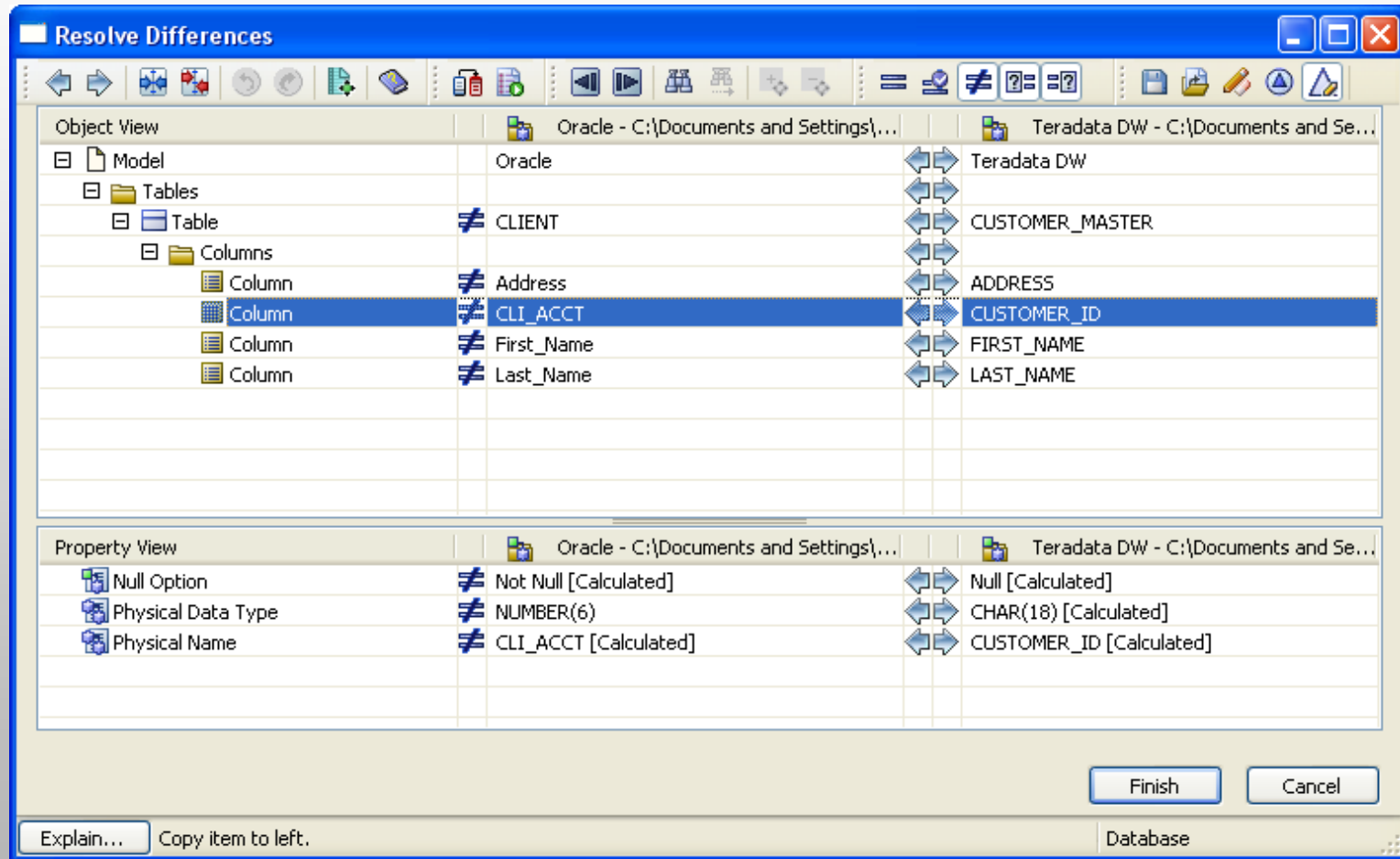
Data Warehouse Example

The image shows three overlapping windows from a database management tool, each displaying a table schema. The windows are titled as follows:

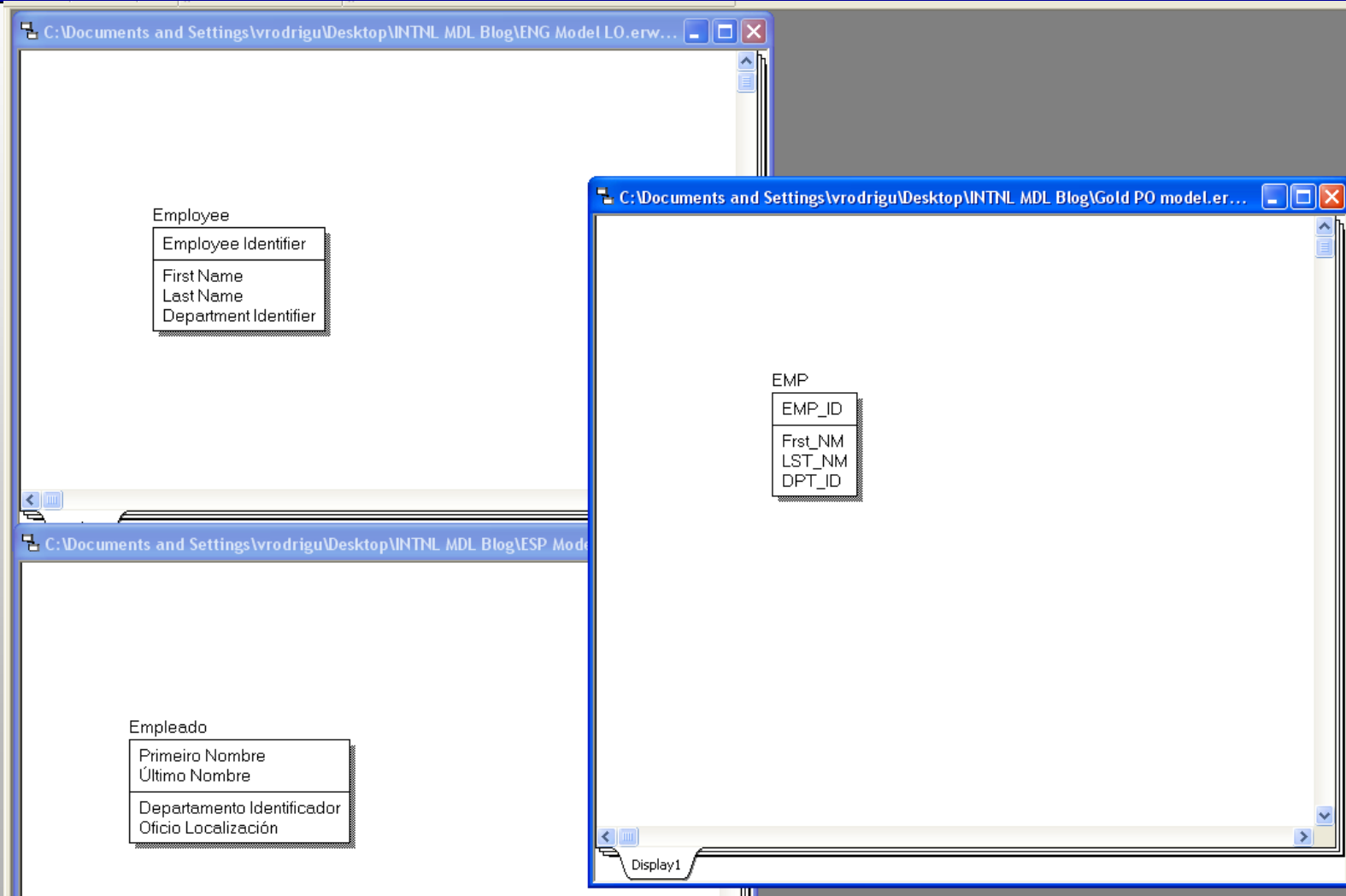
- Top-left window:** C:\Documents and Settings\Victor\Desktop\LINK SAMPLE\Oracle So...
 CLIENT
 CLI_ACCT: NUMBER(6)
 First_Name: VARCHAR2(9)
 Last_Name: VARCHAR2(20)
 Address: VARCHAR2(35)
- Bottom-left window:** C:\Documents and Settings\Victor\Desktop\LINK SAMPLE\...
 CUST
 CUST_ID: numeric(4)
 F_NAME: varchar(11)
 L_NAME: varchar(18)
 ADDRESS: varchar(50)
- Right window:** C:\Documents and Settings\Victor\Desktop\LINK SAMPLE\Teradata DW.erw...
 CUSTOMER_MASTER
 CUSTOMER_ID: CHAR(18)
 FIRST_NAME: CHAR(18)
 LAST_NAME: CHAR(18)
 ADDRESS: CHAR(18)

Each window has a 'Display1' tab at the bottom.

Data Warehouse Example



Translation Example



Translation Example

Eng Gloss.nsm - Naming Standards Editor

File Services Edit View Help

You can build a glossary of words and abbreviations which your entire enterprise can use to name entities, tables, attributes, columns, and domains, by entering them in the grid below or by importing them from your naming standards file. Press F1 for help.

Match whole words only Word Type: All

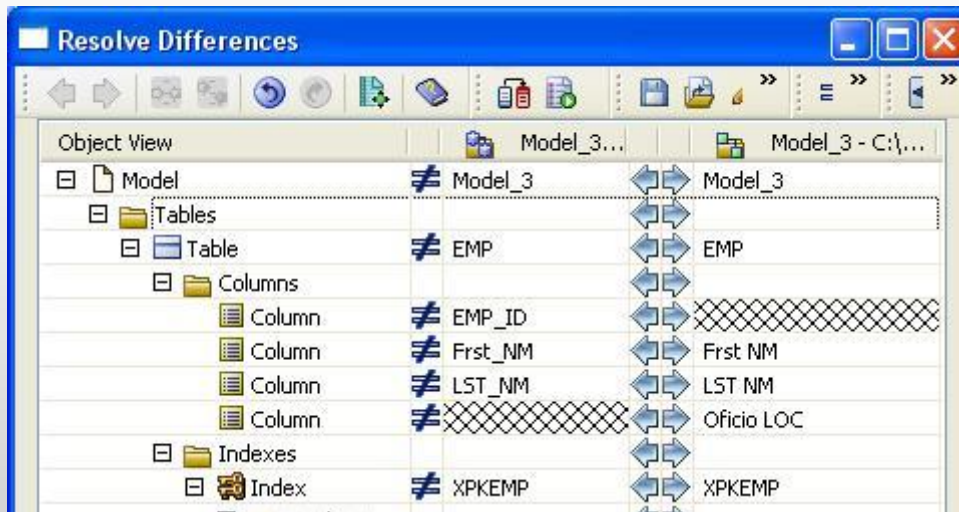
<input type="checkbox"/>	Word/Words	Abbreviation	Alternate Abb	P	M1	M2	C	Description
<input type="checkbox"/>	Employee	EMP		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Identifier	ID		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	First	Frst		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Name	NM		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Last	LST		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Department	DPT		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

file. Press F1 for help.

Match whole words only Word Type: All

<input type="checkbox"/>	Word/Words	Abbreviation	Alternate Abb	P	M1	M2	C	Description
<input type="checkbox"/>	Empleado	EMP		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Identificador	ID		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Primeiro	Frst		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Nombre	NM		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Último	LST		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Departamento	DPT		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Localización	LOC		✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Translation Example – cont.



Empleado

Primeiro Nombre
Último Nombre
Empleado_Identificador

Departamento Identificador
Oficio Localización

2 - Collaboration

- Share designs and templates.
- Model lineage and history.
- Centralized reporting.



Collaboration

- Updates to apps migrate to source DBMS models and vice-versa.
- Define and enforce your glossary and standard abbreviations.
- Create templates.

3 Organization

- Build on Existing Processes
 - You are already governing data (informally).
 - Identify your assets.

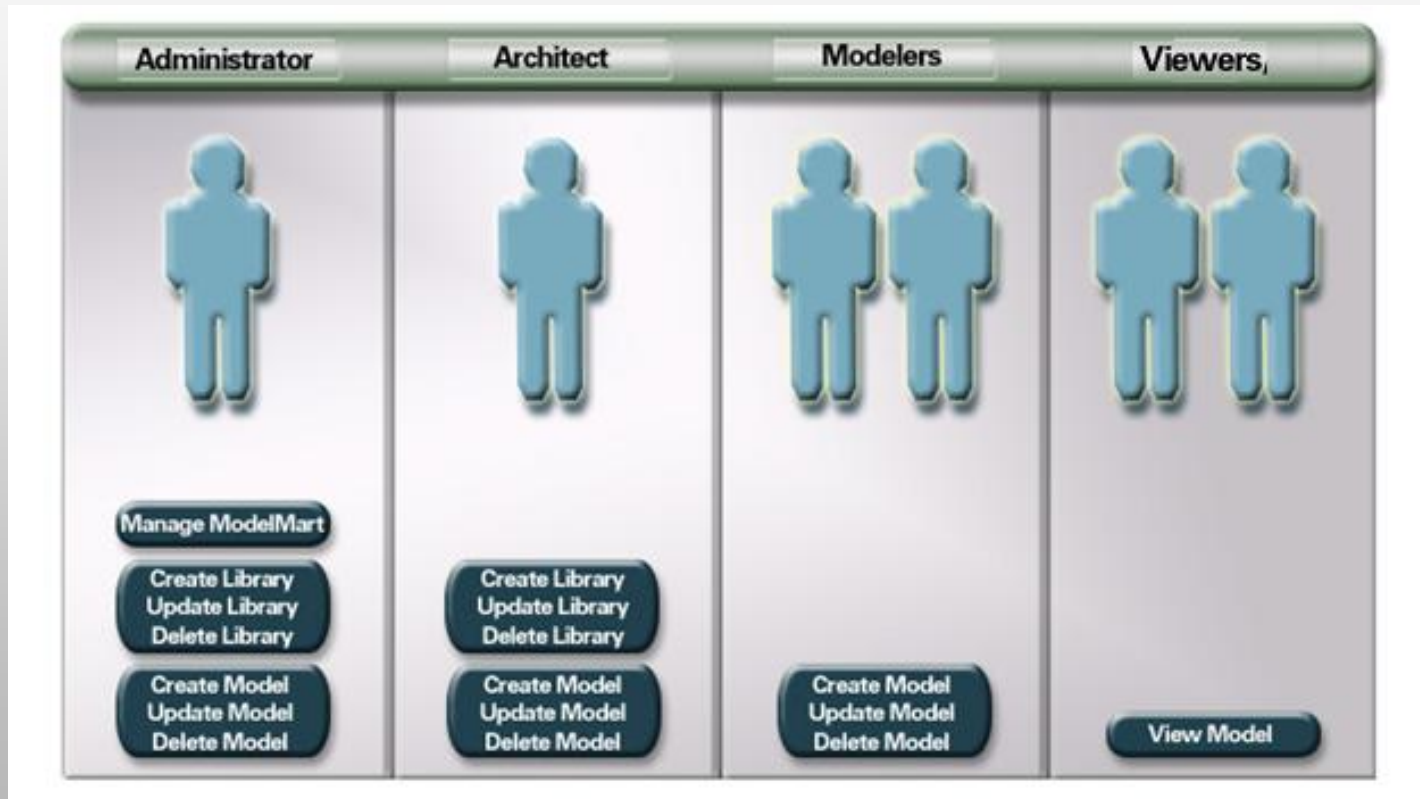
We Need Structure

- Add structure to your existing process.
- Link your models.
- Create libraries in your Model Manager that contain linked application models, related DBMS models, etc.
- Create your Model Manager security roles.

Possible Library Structure

Environment	Description
Typical	<p>In a typical AllFusion MM environment, the entire modeling team is granted full access to the development and test libraries, and read-only access to the production libraries. Testers are granted read-only access to the test and production libraries. Project leaders are permitted to move models from one library to another when development proceeds. In a typical environment, the production library only contains models that generate production databases for the business.</p>
Enterprise	<p>In an enterprise environment, models from application-specific libraries can be merged into the enterprise model that is stored in a separate library. Modelers working on application-specific models are granted full access to those application-specific libraries. They are also granted read-only access to all other enterprise library models. One person or group is responsible for integrating all models into the enterprise model. This user needs to have full access rights to the enterprise library to accomplish this task.</p>

Define your Security



4 Enforcing Standards

- Generate diagram and repository reports to other teams.
- Promote your value to your Business Analysis teams.
- A bidirectional hub to report your standards and update your policies.

5 The Hard Part – Cultural Change

- Data Quality requires a change of culture.
- There is no silver bullet. It is a process.
- Like any habit, it becomes easier with time.
- Replacing bad habits with good ones.
- The process must be bottom up and top down.
 - NUMMI plant example

Good Habits

- Model Everything
 - Applications
 - DBMS
 - Data Warehouses
 - ERP systems
 - Others
 - NoSQL databases, UML models, etc.
- Model your Data Entry.
 - Valid Values?
 - Nullability?
 - Proper and matching Datatypes/Domains.
- Own your (meta)data.
 - Be a good shepherd.
 - Do not pass along bad data.



6 Create Your “TO BE” Design

- Create the “To Be” model.
- Compare “As Is” and “To Be” environments
- Create a process.

Conclusion

- Treat data like the asset that it is.
- Data quality creates information.
- Strong metadata definitions + good habits = data quality.
- Data modeling allows us to structure our metadata.
- Data quality is a process and requires cultural changes.

CA's New ERwin Website

WWW.ERWIN.COM



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Data Modeler

Data Profiler

Process Modeler

Model Manager

Data Model Validator

Model Navigator

Saphir Option for ERP

CA ERwin® Data Modeler

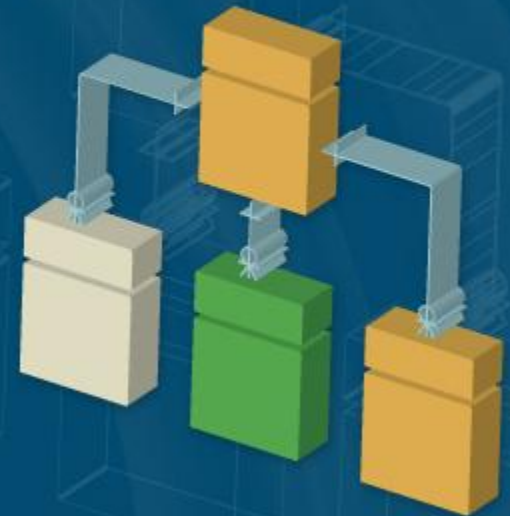
CA ERwin® Data Modeler is an industry-leading data modeling tool that has been the trusted name in modeling for over 20 years. With enterprise-class functionality at an affordable price, CA ERwin allows you to reduce the time and cost spent managing your complex database environments.

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Questions?



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