how can I manage data complexity and improve business agility?
CA ERwin® Modeling provides a collaborative data modeling environment to manage enterprise data through an intuitive, graphical interface.
executive summary

Challenge
With growing data volumes and increased data complexity, the job of the data management professional is more challenging than ever before. In addition, more business stakeholders have a vested interest in the quality of data assets as business intelligence, data governance, and other business-centric initiatives drive increased focus on data. Today’s organizations need an effective way to collaborate across roles and departments in order to manage their complex infrastructure in a simple and cost-effective way.

Opportunity
CA ERwin Modeling provides a collaborative data modeling environment to manage enterprise data through an intuitive, graphical interface. With CA ERwin, both business and technical stakeholders can have a common view of information in context, through both a web-based portal and desktop-based design tools supported by an enterprise-class model repository.

Benefits
CA ERwin Modeling helps increase efficiency through reuse of common data standards while enabling increased data quality and cost savings through a unified view of strategic data assets. With a centralized view of key data definitions, you can have a better understanding of corporate data, managed in a more efficient and cost-effective way.
Section 1: Challenge

Increasing business agility to respond to increasing data complexity

In today’s information-driven economy, data volumes are growing at an exponential rate. As a result, data-centric initiatives such as data quality, governance, and business intelligence are at the forefront of many organizations’ strategic priorities. A common theme of many of these initiatives is the desire for a single, consistent view of core data assets, such as customer or product data, so that organizations can make strategic decisions based on quality information.

Data volume and complexity increasing
Not only are data volumes growing, with more applications to support, but the complexity of data is increasing as well. Most organizations have more than one database platform, and much data is stored in non-relational database formats: within spreadsheets, tools, applications, and more. In addition, the decision of whether to move data to the cloud is an important consideration.

Fewer staff and resources
At the same time, most organizations are cutting back on IT staff, so that there are fewer resources to manage this increased data volume. In addition, the skill sets needed to manage any given database platform are highly specialized. For example, scripts and routines for the Oracle database platform can vary drastically from other platforms such as Teradata or SQL Server. It’s unrealistic and expensive to have multiple experts for all platforms, and as a result, IT staff are challenged with having to cope with more and more new technologies while “doing more with less”.

Increased business focus
With data at the forefront of so many organizational initiatives such as governance, data quality, and business intelligence, more business users and non-technical roles have a growing interest in data. While this increased interest is a positive trend, driving increased focus and funding, it’s often challenging for these non-technical users to be able to access the information they need. Much of the information is stored in complex database scripts or database design schemas that are not intuitive for the average non-technical resource.

Need for collaboration
In order to manage this growing data complexity, the need for collaboration is great—with increased data volumes stored within disparate platforms and the requirement to share information with a variety of both technical and non-technical roles. Not only must diverse technical environments be rationalized to create a common view of core data assets, but this technical environment must be communicated and shared in a way that is intuitive and understandable for a wide range of audiences.
Section 6: Solution

CA ERwin Modeling: Collaboration by design

CA ERwin Modeling provides a collaborative design environment that can help rationalize data from multiple data platforms into a single, intuitive graphical model. Once an inventory of data assets is created, it can be stored within a central repository, where standards can be created and redundancy reduced. Once this central source of definitions has been created, it can be published to a wide array of users in a number of formats: from data definition language (DDL) generation, to export into business intelligence tools, to publication on the web using a business-friendly search and browsing interface.

Data modeling: at the center of your data management initiatives

Whether your organization is participating in a business intelligence project, a data governance initiative, or a master data management effort, a data model and associated repository can be a central source for core definitions and data structures that can be shared and reused across these various initiatives. Not only can this help reduce redundancy and “reinvention of the wheel”, saving time and money, but it can also help increase quality, as all projects use the same, consistent definitions.

Figure A.

CA ERwin Modeling can provide a single source of reference for your data management initiatives.
Design and build

With CA ERwin® Data Modeler, technical database structures can be visualized through an intuitive, graphical model. With built-in interfaces for the majority of the database platforms in the market today, CA ERwin Data Modeler is able to read the technical formats of each of these unique database platforms, and translate technical scripts (e.g. DDL) into a graphical model. From this model, future database schema changes can be made, so that development can be implemented via model-driven design. Not only can technical database schemas, procedures, and other information be stored in the model, but business definitions and data-centric business rules can be stored as well, so that technical implementations can be better aligned with the needs of the organization. Using an advanced Design Layer Architecture, model “layers” can be created—with one or more models focused on the business requirements that can be then linked to one or more database implementations. Using a model as a central source for both business and technical designs helps increase the consistency of data, and improve the agility of IT teams in order to meet the needs of the organization in an efficient, meaningful, and cost-effective way.

Figure B.

CA ERwin Data Modeler allows you to manage complex data structures in an intuitive, easy-to-use graphical interface.
Manage and collaborate
Using the CA ERwin® Data Modeler Workgroup Edition, models can be stored in a central repository that can provide conflict resolution, versioning, security, standardization, and model organization and hierarchies. Through a central model repository, model assets can be inventoried and re-used across the organization. Disparate teams across the organization, even those in diverse geographies, can access and “check out” model objects for new or existing projects. Using this central repository and its associated conflict resolution and versioning capabilities, modeling teams can collaborate to create common objects that can be reused to help create data quality and consistency.

Communicate and share
While many users, such as data modelers, data architects, and database administrators (DBAs) prefer to use a data model as a primary means of communicating database designs and definitions, many other users, particularly non-technical users, need to see the definitions stored within the model, but in a different format. CA ERwin Modeling provides a number of ways to share information with other roles.

Included within every copy of CA ERwin Data Modeler are over one hundred import/export interfaces with other tools such as: business intelligence (BI) tools, extract-transform-load (ETL) tools, other data modeling tools, enterprise architecture tools, and more. With these interfaces, definitions created with ERwin Data Modeler can be directly imported into other tools. When other teams can easily import the definitions stored in ERwin Data Modeler and the associated Workgroup Edition model repository, more teams can leverage the benefits of the central source of definitions.
Many users need simple ways to view or report on model information. With every copy of CA ERwin Data Modeler comes a copy of SAP Business Objects’ Crystal Reports. Customers can use out-of-the-box reports, or create their own using the full report development environment provided with Crystal Reports. For customers who use other reporting tools, a generic ODBC interface is available which provides an easy way to query ERwin metadata from a variety of tools and interfaces.

The CA ERwin Web Portal® provides an intuitive interface for both non-technical and technical roles to view the information stored in the central model repository. Using simple tools such as web-based internet search and drill-down, model diagram visualization, and graphical impact analysis, users can have an over-arching view of the organization’s information assets and the inter-relationships between them. Key to this solution is the ability to perform impact analysis and “where used” reports so that users can see how objects interrelate and the impact that a change to one of these objects may have on other objects, projects, and roles.

Figure D.
The CA ERwin Web Portal provides diverse visualization options for a variety of user types, from internet-style search to graphical impact analysis, and more.

“Our biggest business benefit has been the documenting and publishing of metadata to our end users.”
- Nikitas Gogos,
Data Architect, AmeriCredit Corp.
Section 3: Benefits

Increased business agility through repository-driven design

A repository-driven, model-driven architecture using the CA ERwin Workgroup Edition combined with the CA ERwin Web Portal helps organizations increase agility and communication across the enterprise.

Efficiency and cost savings
When team members are able to leverage existing data definitions from a common source, this can not only increase data quality, but also reduce redundancy and rework, or “reinventing the wheel”. Rather than creating data definitions from scratch, users can simply “check-out” model objects from a common repository, saving time and money for the organization.

Communication across the organization
With a common, easily-accessible source of data definitions, a wide variety of users across the organization can more easily communicate and share information. Business users, for example, can research data element definitions, while technical users might reference common database structures. Once stored in a common repository, these definitions can be easily accessed via data models in the CA ERwin Data Modeler Workgroup Edition or published to the CA ERwin Web Portal for intuitive web-based browsing.

Data quality and consistency
Using the CA ERwin Data Modeler Workgroup Edition, data standards can be stored in a central repository, so that models, naming standards, domains, and other common standards can be easily reused and shared across the organization. With all teams leveraging the same information from a common source, team members are more likely to use consistent model object definitions, reducing the creation of disparate and inconsistent definitions across the organization which helps with a more homogenous set of data definitions and structures that lead to improved data quality overall.

Compliance and regulation
Regulatory and audit requirements are a major driver of many data management initiatives. Organizations can show accountability for data assets through repository-driven impact analysis, versioning, and security. Once these assets are stored in the central repository, impact analysis and reporting can be easily performed using the CA ERwin Web Portal.

Section 4:
The CA Technologies advantage

CA Technologies is an IT management software and solutions company with a deep expertise across all environments—from mainframe and distributed, to virtual and cloud. For more than 30 years CA Technologies has helped customers transform the highly complex ‘silos’ that characterize vertically
disparate IT functions. CA ERwin Modeling helps customers manage information from these silos and create a centralized, visual roadmap of their information assets. CA ERwin Modeling helps increase efficiency through reuse and standards while enabling increased data quality and cost savings through a unified view of strategic data assets.

Section 5:
Next steps
Consider CA ERwin Data Modeling if you:

• Have a complex data environment that’s difficult to manage
• Need to collaborate with multiple audiences across the organization, particularly business users
• Have a requirement to integrate with a wide variety of tools: Business Intelligence (BI), Master Data Management (MDM), other modeling tools, etc.
• Are looking for a collaborative data management solution that could help you reduce costs through reuse and standards while enabling increased data quality and cost savings through a unified view of strategic data assets

To learn more about how CA Technologies can help manage your data complexity, visit erwin.com