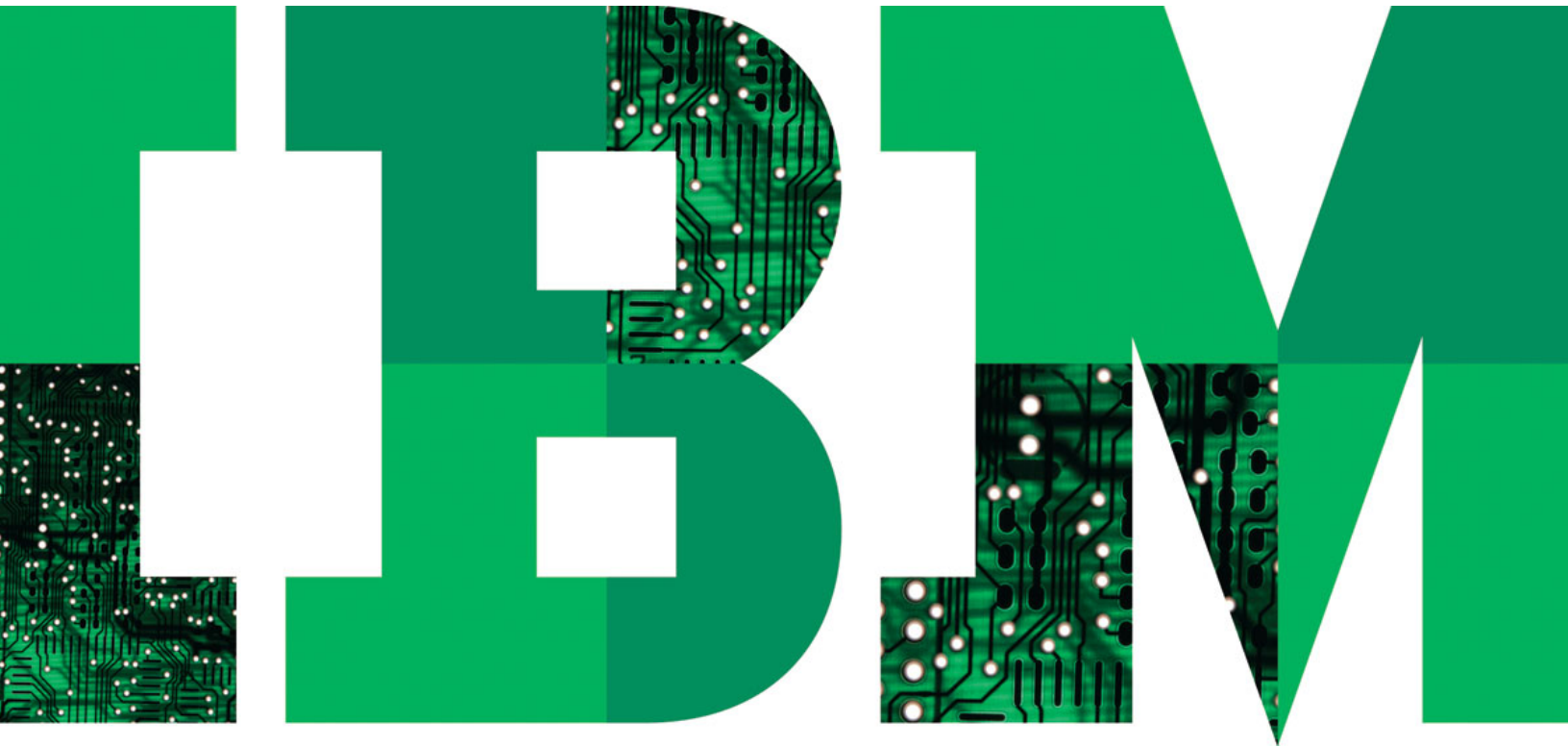


# Information-led transformation— planning, modeling and building new intelligence applications



CEOs describe how leveraging information is reshaping value chains, influencing products and services, and changing the way their companies interact with customers. CEOs told us they're changing their business models because they are finding it increasingly difficult to differentiate based on products and services alone.

But they also stressed another reason: they simply have more options now. In a recent IBM survey of CEOs around the world, nearly all CEOs are adapting their business models; two-thirds are implementing extensive innovations, and more than 40 percent are changing their enterprise models to be more collaborative.

### Why industry models? Driving information-led transformation

What is an industry model? An industry model:

- Records the details of the business in a comprehensive, integrated, well-documented manner
- Acts as communication mechanism between business analysts and technical specialists
- Drives the development of IT specifications, Reporting & Analytical requirements
- Used for phased and incremental projects
- Formal view of the enterprise
- Provides Multiple levels of abstraction
- A method of organizing the data of the organization
- Provides and supports a single version of the truth

What is the value of industry models? Industry models can:

- Align business and technology strategies
- Create a common understanding and definition of the information assets
- Speed time to value
- Deliver industry-specific key performance indicators

- Accelerate the deployment of a trusted information infrastructure
- Enable fact-based decision making across the business units

### Why Industry Models? Driving Information-Led Transformation Projects

- Value:**
- Aligns business and technology strategies
  - Creates common understanding and definition of the information assets
  - Faster time to value
  - Delivers industry-specific key performance indicators
  - Accelerates the deployment of a trusted information infrastructure
  - Enables fact-based decision making across the business units

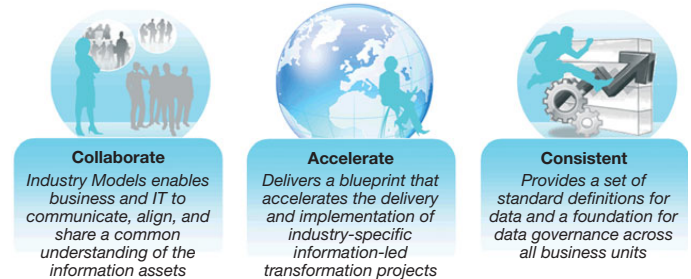


Figure 1. Industry models add value to, and drive, information-led transformation projects.

### Collaborate

Industry models enable business and IT to communicate, align and share a common understanding of the information assets.

### Accelerate

Industry models deliver a blueprint that accelerates the delivery and implementation of industry-specific, information-led transformation projects.

### Consistent

Industry models provide a set of standard definitions for data and a foundation for data governance across all business units.

---

### What is an industry model?

- Records the details of the business in a comprehensive, integrated, well-documented manner
  - Acts as communication mechanism between business analysts and technical specialists
  - Drives the development of IT specifications, reporting and analytical requirements
  - Used for phased and incremental projects
  - Formal view of the enterprise
  - Provides multiple levels of abstraction
  - A method of organizing the data of the organization
  - Provides and supports a single version of the “truth”
- 

### Industry model considerations—buy or build?

Many companies look at purchasing an enterprise-wide industry model and question the investment. After all, most of the data that is going to be placed into an information system has come from an operational system that has a data model. There are issues such as: Is there data that is similarly labeled in each system, but may have a different meaning?

For example, something as common as the term “customer.” Moving from one operational system to the next, each may differ on when a person becomes a customer, what benefits a customer has, and when they cease to be a customer. Listing or counting customers then becomes problematic since there is no agreement on whether a person is, or is not, a customer.

Some key “buy-or-build” considerations include:

### Model design

A major challenge with designing an industry model is that the model’s design should take into consideration the entire sequence of projects—not just the first phase. It’s all too easy to do the model design based on Phase 1, which can be adapted for Phase 2, but Phase 3 and subsequent phases will break the model.

To avoid this issue:

- The design should not reflect current sources or targets, but rather a neutral model that can expand and adapt over time to encompass all data of interest to the enterprise.
- Accept that volatility in systems and requirements is a fact of life and has a huge impact on data architecture. It is not easy to extend.

### Maintenance

We live in a highly volatile world where the only constant is change itself. Government mandates, new technologies, new lines of business—all can impact the data an organization processes and therefore the needs to organize the new data.

The scope of the average model doubles every 1½ years and, even using in-house modeling skills, it requires a repeatable methodology to avoid fragmentation and redundancy and an enforced approach to ensure knowledge retention and consistent data definition.

Proper tooling is critical to ensure this maintenance and the tested certified integration between the model and the relevant tooling. One of the key questions you should ask is: How will you extend the model years from now, when the requirements change?

### Executive support

Regardless of the approach, the model defines the business including its Key Performance Indicators (KPIs) and therefore needs to be aligned with management’s view of the business. Frequently, each line of business will have its own view of its business and trying to gain a total view is like trying to see through a series of unaligned, different-sized and tinted windows on the business.

The enterprise model integrates each line of business around the KPIs that are common to that industry. Therefore, an important step in creating a model is gaining senior executive support and line of business executive support across the organization. Often, this is the first time a single version of “the truth” exists to define a common understanding and definition of the information assets.

Consider an example at a telecommunications company, where the CIO, CEO and CFO meet with a data architect to discuss a KPI known as “active subscriber.” This was a report that each of them viewed daily and a key part of their reporting to headquarters, yet it was very apparent that they all disagreed on the definition.

This situation is actually quite common, but through the use of definitions that have been resolved by hundreds of organizations in that same industry the standard model quickly enables business and IT users to agree on the definition and use of business terms across the company.

While modeling certainly can be done as an in-house custom project, IBM research has shown there is a significant cost difference in the “buy-or-build” equation. This analysis also does not account for the high risk of total failure due to changes in personnel, changing requirements and lack of appropriate skill sets.

Based on interviews with a number of companies in the insurance industry, IBM documented the costs involved in building a model at these sites.

### Cost assumptions

1. Documenting a business definition “X” takes four hours per element.
2. Comparing new data elements “Y” to existing elements and mapping takes one hour.
3. Cost per element = 5(X+Y) hours
4. Labor rate: \$75 an hour (2008 rates)

### Time assumptions

1. Staff of four business analysts, a database administrator and project manager
2. Productivity rate of 60 percent
3. Assuming the deliverables are 100 percent correct.

Project completion: 312.5 person-weeks/six person-years  
 Total: Average Cost \$2.25 million and six person-years to build the model.

### Information-led transformation

More and more information is available, but proportionally less of it—and radically less of the information being created in real time—is being effectively captured, managed, analyzed and made available to people who need it. We are crossing a new threshold in our ability to capture, process, model, evaluate, aggregate, prioritize, forecast and analyze how the world’s major economic, social and physical systems work in fundamentally new and deeper ways. To effectively harness that ability in our organizations requires an intelligent, robust information infrastructure.

To cope with this dramatic growth in the amount of data, creating new data centers with exponentially larger storage and faster processing is necessary, but by itself, is not sufficient. The flow of information needs to be managed to deliver richer insights and to make faster, better decisions.

New intelligence applications are examples of an information-led transformation that enables the use of information as a strategic asset that can be more quickly used for sustained competitive advantage.

Processing systems	Illustration	Policy Administration	Underwriting	Billing	Rating	Printing and reporting
Data elements	1,000	1,000	1,000	1,000	1,000	1,000
Total elements	6,000					
Estimated total cost	5 (6,000) * 75 = \$2.25 million					

Companies starting on an information-led transformation to develop pervasive intelligence and optimize business processes require:

- **An information agenda:** Organizations must have a strategic plan to align their information with their business objectives, including situations that may be unique to their industry or organization.
- **Business analytics to optimize decisions:** Organizations need to make better, faster, more accurate decisions through planning, monitoring, reporting and predictive analysis of their information.
- **A flexible information platform:** Organizations need to have the agility in their technology platform, infrastructure and common software services to support their needs at an optimal cost and to ensure that information can serve as a trusted asset that can be shared and securely accessed by all who need it, when and where, they need it.

## IBM Industry Models—business and technical blueprint

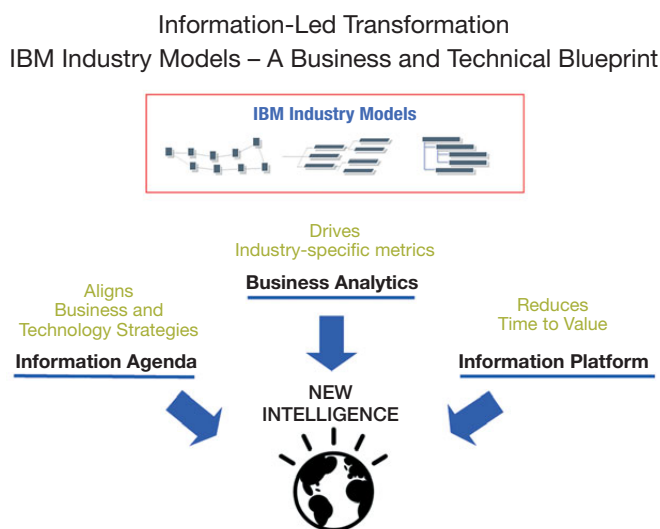


Figure 2. IBM Industry Models provide a business and technical blueprint for an information-led transformation project.

## Information platform—reducing time to value

Information is an asset and can be a competitive advantage, if customers can unlock the business value of information in time to make better decisions and deliver valuable information-based services.

Information can also be a risk. Without the right security, compliance, and retention policies, unnecessary expenses and liability can distract an organization from its mission.

A telecommunications company with 20 million customers reduced access time to sales, customer management, and facility information from one month to one day; ad hoc information access time from three days to one day, and data analysis turnaround time from three weeks to six hours.

The 50 Terabyte data warehouse, fed by 86 data source systems, was up and running in nine months.

IBM Industry Models act as key accelerators for migration and integration projects, providing a proven industry-specific template. They can be loaded directly into a number of IBM InfoSphere™ products, providing target data structures and prebuilt business glossaries to accelerate development efforts. By using these Industry Models, organizations can dramatically accelerate their projects, gain an enterprise view of their information, while overcoming the traditional organizational issues typically faced when integrating information by providing a proven, neutral, base model.

## IBM Industry Models—reducing time to value

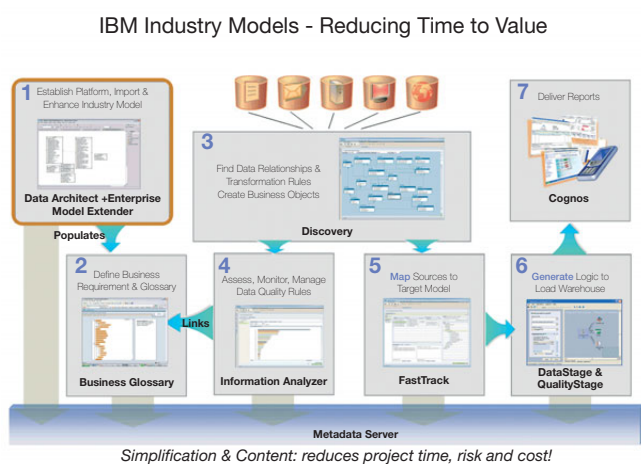


Figure 3. IBM Industry Models help reduce time to value, risk and cost.

An essential objective of any data warehouse infrastructure or master data management project is gaining an enterprise view of the data—as opposed to a particular organization within the company. This enables corporate-wide reporting and monitoring of such KPIs as profitability, cash flow and sales.

The data model specifies how data is structured and how it is accessed for analysis and reporting. IBM Industry Models provide logical models with predefined data structures. Independent of any particular account, product, organization or channel hierarchy, the models provide the data structures typically needed to build a data “mart,” or warehouse, and can help automatically generate the physical data mart or warehouse from the model.

## Business analytics—selecting industry-specific KPIs

Today’s business environment is fundamentally different—new economics, globalization, massive interconnections and increased risk, coupled with a dramatic growth in the amount of information.

Business leaders, making crucial decisions every day, sense that they are operating with major blind spots, precisely at a point in time when margins for error have been reduced to nearly nothing, where costs have to be taken out of the system and the velocity of decision making is increasing exponentially. Intuition and “gut-feel,” fueled mostly by personal experience, is no longer sufficient.

A fundamental shift to a smarter, fact-based enterprise is essential, and possible, based on the broad application of advanced analytics to a far richer, integrated set of information. IBM can make this a reality by bringing together foundational business intelligence and performance management with advanced analytics, world-class software solutions and proven models that accelerate client time to value.

Many companies find that their current business intelligence solutions cannot keep up with changes in the industry or increased competition. Often, the information needed to understand customers and operations is spread across numerous information silos and in multiple formats. The problem is not a shortage of data or reporting systems—it’s the fact that it’s not available in a consolidated business analysis format that clearly indicates trends, patterns or other forms of analysis.

Getting relevant information into the hands of business users can help combat industry challenges through better decision making, consistent reporting, differentiated products and superior service. This means delivering information to the users in a form that directly mirrors the KPIs of the business.

Many companies today are unsure of which KPIs they should monitor, much less the data required to accurately calculate them. The data feeding these KPI metrics needs to have been preintegrated and driven to the sufficient data quality to generate a reasonably accurate answer. Defining the KPIs and the IT infrastructure necessary to integrate the data can be a very daunting task.

IBM Industry Models deliver numerous KPIs that enable quick and easy specification of analytical reporting requirements that form the basis of reports and executive dashboards. Based on real-world industry experience, IBM Industry Models have templates that feature data mart or warehouse designs to support a number of business areas specific to each industry.

## Business Analytics—delivering industry-specific KPIs

### Business Analytics IBM Industry Models – Selecting Industry KPIs Example

Customer Lifetime Value Analysis Analytical Requirement detail

Dependency	Reason	Cause	Path
Scenario	Required model...	Customer Lfsh...	**DWR Required
Time Period	Required model...	Customer Lfsh...	**DWR Required
Customer Market Segment	Required model...	Customer Lfsh...	**DWR Required
Customer Relationship Age S	Required model...	Customer Lfsh...	**DWR Required
Individual Age Group	Required model...	Customer Lfsh...	**DWR Required
Line Of Business Reporting G	Required model...	Customer Lfsh...	**DWR Required
Organization Unit Function	Required model...	Customer Lfsh...	**DWR Required
Asset Dealing Segment Type	Required model...	Customer Lfsh...	**DWR Required
Measurement Currency	Required model...	Customer Lfsh...	**DWR Required
Reporting Currency	Required model...	Customer Lfsh...	**DWR Required
Communication Form	Required model...	Customer Lfsh...	**DWR Required
Customer Lifetime Value	Required model...	Customer Lfsh...	**DWR Required
Total Acquisition Cost	Required model...	Customer Lfsh...	**DWR Required
Total Profits Value	Required model...	Customer Lfsh...	**DWR Required
Total Required Revenue Gro	Required model...	Customer Lfsh...	**DWR Required
Total Performance Savings	Required model...	Customer Lfsh...	**DWR Required
Total Customer Net Present	Required model...	Customer Lfsh...	**DWR Required
Total Number Of Credit Buys	Required model...	Customer Lfsh...	**DWR Required
IBM New Profitability	Customer	Customer Lfsh...	**DWR Required

Customer lifetime value analysis measures      Customer lifetime value analysis dimensions

Figure 4. This screen capture displays an example of business analytics, namely, key performance indicators, for an industry model.

To help organizations achieve results more quickly, IBM has packaged the knowledge from years of experience in working on information projects within specific industries into the IBM Industry Models.

For the vertical markets covered, they provide the most comprehensive and robust models representing years of development and encapsulating industry experience from hundreds of customer implementations.

IBM Industry Models are an important first step for transforming the way a business manages information. They enable an organization to adopt a structured, or modeled, approach in the delivery of the company's information-based assets and provide a complete, fully attributed model along with KPIs, metrics and compliance concerns for each industry.

A retailer adopted the IBM Information Agenda methodology to transform their information into a strategic asset, and identified a business intelligence application as its first major project.

The IBM Industry Models enabled the business and IT staff to agree on the KPIs and begin delivery of key reports, using Cognos®, in just six weeks.

Previously, the business and IT communities needed more than six weeks to agree on just what the KPIs should be.

## Information Agenda—Targeting Strategic Projects

An Information Agenda is a comprehensive, enterprise-wide plan that explains how to take the information being generated across, and even outside of the organization, and put it to use to better run the business. In establishing an Information Agenda for the organization, the CIO, working with line of business colleagues, puts information to work to achieve both short-term and long-term strategic changes.

An effective way to accelerate a project is to start with a data model that has all the business and technical terms. A business glossary should be created as the authoritative dictionary of business terms and relationships used across the lines of business.

IBM Industry Models provide a blueprint for information-led transformation, integration, or migration projects. The models provide business and technical data definitions that become a blueprint for information-based projects.

The unique characteristics of the IBM solution focus on information-based projects that cross all lines of business. This enables the business and IT users to build more complex systems with trusted information across all lines of business.

IBM Industry Models accelerate the delivery of an Information Agenda by:

- Identifying data and content vital to the organization
- Identifying how, when and where information should be made available
- Determining data management processes and governance practices
- Identifying and prioritizing the information projects that deliver the greatest return
- Aligning information use to match the organization’s business strategy
- Providing a blueprint to deploy an information infrastructure that meets both immediate and future needs

## IBM Industry Models—targeting strategic projects



Figure 5. IBM Industry Models target strategic projects in a wide variety of industries and applications.

IBM Industry Models deliver industry expertise and regulatory best practices in a form that can be used by both business and IT communities. Expressed in business terms, the models help business and IT to collaboratively scope their requirements, thereby enabling IT to implement projects faster.



The result is faster time to value, fulfilled expectations and reduced project risk. The data models include interrelated business glossaries, enterprise data warehouse and reporting requirements models.

### Next steps

IBM Industry Models can be used to accelerate the deployment of new intelligence applications such as data warehousing and business intelligence applications. They use real-time data, risk and compliance, new product introduction, customer profitability and experience, financial management, or other strategic business initiatives in industries that include banking, financial markets, insurance, telecommunications, health care and planning, and retail.

Select a deliverable that is manageable and that can be divided into a number of smaller, more easily achievable projects. This enables quicker time to value and increases the chances for the project overall.

IBM Industry Data Models are designed to enable this type of project progression. This enables a set of projects that are low in risk while more value is gained from each implementation.

An information-led transformation is a journey that can begin—and deliver immediate value—at any stage in an organization's maturity in its use of information. It does not require major investments of resources or time to deliver value. And you can start at any point—depending on where you are in your own journey.

Finally, past efforts in creating a model that is both comprehensive and flexible required significant investments.

IBM Industry Models represent a way to accelerate projects and deliver a model that is comprehensive, flexible and cost effective.

---

**A leading financial services company with several principal business units, each focused on optimizing their own operations, found their ability to respond quickly to changes in the market was slow and not competitive. IBM Industry Models were used as a blueprint to implement a customer profitability project that required data from all business units.**

**IBM Industry Models served as a collaboration vehicle enabling all business units to understand and communicate data terms and definitions with consistency.**

**This project produced a customer-centric application that was used by all business units, strengthened their relationships with their existing customers, and enabled them to launch new information-based financial services.**

**Other benefits included:**

- **Reduced time and costs to deliver business performance and analytics applications by 30 percent**
  - **A company-wide data infrastructure that could be used by one of the industry model's banking projects to address regulatory risk, compliance and governance in the areas of credit and operational risk (as defined by the Basel II Accord)**
-





## For more information

To learn more about the IBM Industry Models, please contact your IBM marketing representative or IBM Business Partner, or visit the following Web site: [ibm.com/software/data/industry-models/](http://ibm.com/software/data/industry-models/)



---

© Copyright IBM Corporation 2009

IBM Software Group  
Route 100  
Somers, NY 10589 U.S.A.

Produced in the United States of America  
December 2009  
All Rights Reserved

IBM, the IBM logo and [ibm.com](http://ibm.com) are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml).

Other company, product and service names may be trademarks or service marks of others.



Please Recycle

---