



---

## Highlights

- Reach all your information reliably and quickly
  - Deliver a complete, consistent view of your business
  - Cost-effectively scale as user communities and data volumes grow
  - Adapt to change with a flexible infrastructure
- 

# The IBM Cognos Platform

*Deliver complete, consistent, timely information to all your users, with cost-effective scale*

## Overview

IBM Cognos® Business Intelligence is an open, enterprise-class platform designed to provide complete, consistent and timely information to your user communities.

Satisfy your business intelligence (BI) needs, such as reports, dashboards, scorecards, analysis and planning, with a platform that helps reduce the complexity of your BI environment, helps increase your return on investment and helps reduce your total cost of ownership.

## Reach your business information when you need it

The Cognos platform enables your Cognos software to access the relevant data sources throughout your organization and even outside of it. It provides broad reach and open access to a mix of data sources present in most organizations today, whether they are data warehouses, technology platforms applications, OLAP cubes, legacy data sources or unstructured data. In addition, it provides a modeling environment for building access to needed information.



### Common data view from interfaces

With the Cognos platform, data can be brought into your environment for a consistent authoring experience. No matter which interface authors and analysts are using—from the Cognos Business intelligence reporting capability for professionally authored reports to Cognos Workspace and Cognos Workspace Advanced for interactive analysis—the complexities of the underlying data sources are hidden.

The Cognos platform optimizes data retrieval while providing users with consistent access. New data sources can be added quickly with data from the new source becoming immediately available to all Cognos capabilities.

### In-memory acceleration

The Cognos platform features a query layer, called the dynamic query layer, that offers enhanced performance for complex heterogeneous data and was developed to meet requirements for interactive reporting and ad hoc analysis. The best practices learned over decades of BI software development were applied to its design. Dynamic query retains result sets and metadata captured from optimized queries to relational and OLAP data sources in a 64-bit, in-memory cache. It can reuse these result sets and metadata to minimize the wait times for future requests. It employs sophisticated, multiphase query optimization techniques and can dynamically alternate between SQL and MDX processing, depending on what best suits the scenario.

With dynamic cubes, an extension of dynamic query, the Cognos platform offers flexible and optimized in-memory analytics acceleration, resulting in rapid response times over terabytes of warehoused data. To achieve high performance, dynamic cubes use the power and scale of the relational database and a combination of caching, optimized aggregates and optimized SQL.

### Flexible data sourcing approaches

The Cognos platform offers various sourcing approaches to provide data in the format and with the frequency required by your business.

#### *Federated access*

With Cognos Framework Manager, you can combine data on the fly from multiple sources into a virtual view. Current and historical data are presented alongside each other so you can query it without incurring the overhead of physically building a data warehouse or data mart.

#### *Dimensional ETL*

Data professionals can use Cognos Data Manager, an ETL tool, to build dimensional data warehouses and data marts for Cognos software. It is the optimal tool for high-performance transformations and provides a dimensional framework that automates the management of slowly changing dimensions, late arriving facts, surrogate key management, balancing, flattening and recursive hierarchy support.

#### *Data lineage*

The Cognos platform includes an investigation feature that provides greater understanding of the data and where it is coming from. Users right-click a report table or chart and select Lineage to view the lineage information of a data item. This lineage information traces the item's metadata back through the report and the report's data sources.

### Optimize access for faster data delivery

The Cognos platform provides tools for optimizing data storage for access. Cognos Transformer enables IT to build and provide OLAP cubes to help accelerate analytics of data sources such as transactional systems. The resulting cube can be accessed by any Cognos interface.

### A complete, consistent view of business

The Cognos platform ensures consistent information and query results for your entire organization with a multilingual common business model. The common business model packages up relevant information and distributes it to different user communities so they can all work with the same data, no matter which capabilities or interfaces they are using.

The business model can be multilingual, reducing duplication of effort and report proliferation.

The common business model can be packaged up and published as any number of targeted views. Departments and user communities get the view of data they want and need without being overwhelmed too many reports. No matter the capability, the device, or department, information remains consistent.

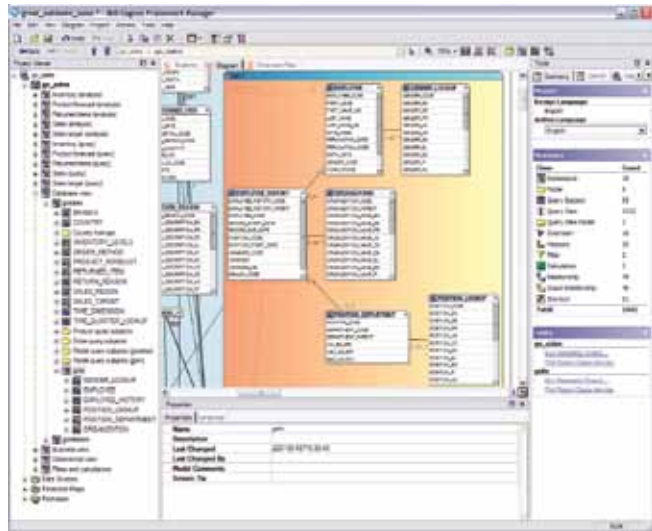


Figure 1: Framework Manager helps IT build a common business model to ensure all users get a consistent view of the business, no matter the data source type or location.

### A common business model

Data modelers create a common business model using Cognos Framework Manager, a metadata modeling tool.

Cognos Framework Manager provides cross-functional business views that span heterogeneous data sources, insulates the business from the technical complexity of the underlying data sources and becomes the common foundation for information sharing on an enterprise scale.

### Enhanced data model development

The Cognos platform provides a number of capabilities for metadata modelers and modeling teams that are designed to speed model development and yield optimal results.

#### Cognos Model Design Accelerator

The Cognos Model Design Accelerator is a graphical utility that guides both novice and experienced modelers through a simplified modeling process. Novice modelers can more easily build powerful models without extensive experience or training, and experienced modelers can create models faster.

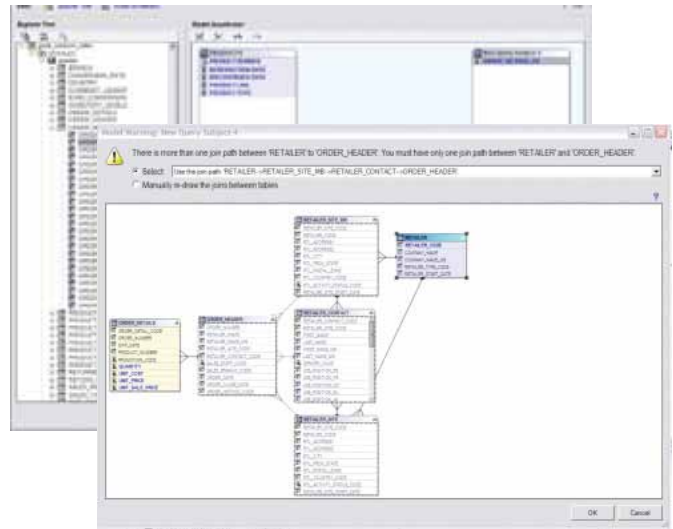


Figure 2: Cognos Model Design Accelerator helps modelers build an optimal model and easily maintain and manage it.

### *Cognos Cube Designer*

IBM Cognos Cube Designer is the tool used to define dynamic cubes, which enable high-performance interactive analysis over terabytes of warehoused data. Designed to connect directly to a data warehouse, Cognos Cube Designer can use existing relationships from a star or snowflake schema to make cube creation easier and faster. Cubes created by Cognos Cube Designer become objects in the content store, are administered in Cognos Administration and are open to the Cognos SDK for automation or other custom applications.

### *Model development guidance*

Modelers have the information they need at their fingertips to build a robust model, right from the start. Accessible directly from the tool, Cognos Model Advisor provides guidance to help improve the model as it is being designed and as it evolves over time.

### *Multi-participant modeling*

The Cognos platform provides an environment for modelers to work in teams for model development. Models can be segmented for different developers and then brought back together to create the enterprise model.

## **Cost-effectively manage and scale as user communities and data volumes grow**

The Cognos platform provides consolidated system management features such as task-based system monitoring and proactive administration. Using these features, IT can manage your Cognos Business Intelligence systems cost-effectively.

### **Deploy applications more broadly**

The Cognos platform enables you to deploy broadly with peer-to-peer services, built-in fault tolerance and predictable linear response.

To avoid more hardware deployment, it can reroute services during peak time with built-in load balancing. Almost any request can be routed to and handled by any server in the system.

The Cognos platform can scale in linearly to provide predictable responses to increasing workloads. With linear scalability, administrators can plan for resources when scaling their Cognos family solutions.



Figure 3: IT can reschedule or delay reports as they need to, allowing them to reduce bottlenecks such as when too many reports have been scheduled to run at the same time or for large reports that are slowing down the run time of other reports.

## **Enhanced system management efficiency**

The Cognos platform provides several capabilities for streamlining system management to help reduce IT administration tasks.

### *Task-oriented system monitoring*

With task-oriented system monitoring, administrators have a consolidated view of system activity, from scheduled and interactive report to servers and dispatchers. Administrators can prevent bottlenecks and reduce the load on the system because they can see hourly schedules and data elements and can suspend activities.

#### *Proactive system administration*

The Cognos platform helps the amount of time administrators have to spend finding information by providing detailed system metrics that can be monitored automatically. Administrators can set thresholds that trigger personal alerts, which can help them detect issues early and take action.

#### *System Management Methodology*

Companies can jump start their Cognos family deployments and get results more quickly with the Cognos System Management Methodology which consists of:

- White papers that explain best practices for system administration (for example, system auditing), complete with sample reports
- Metadata models that speed up your ability to administer your deployment
- Tools that establish performance thresholds automatically in your specific environment
- Sample administration models and reports build with Cognos Business Intelligence, to help administrators understand performance trends and tune system performance

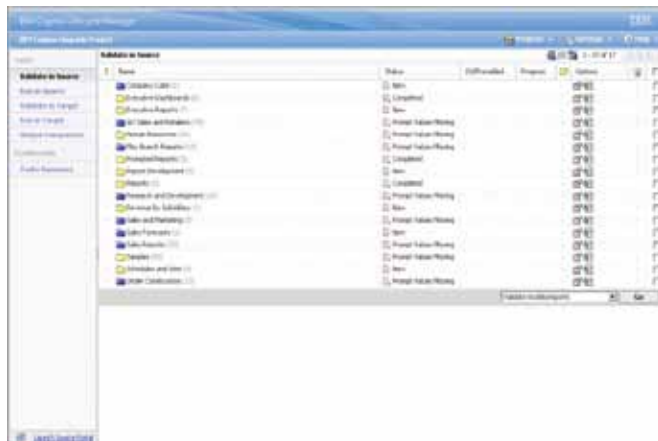


Figure 4: Cognos Lifecycle Manager enables IT to streamline environment changes to minimize the impact not just on IT but the entire organization.

#### *Cognos Dynamic Query Analyzer*

Cognos Dynamic Query Analyzer is a query diagnostics tool for IT that includes graphical representation of query execution. This helps administrators see how a dynamic query was generated and displays results flow, helping IT to maintain and troubleshoot queries.

Cognos Dynamic Query Analyzer also includes Cognos Aggregate Advisor, which can optimize aggregates as part of using dynamic cubes. The Aggregate Advisor recommends optimal aggregates for specific workloads, such as reports, packages, heavy load periods or even specific users, that can be created in database or in-memory. In-memory aggregates are automatically created on cube restart, with no re-authoring or re-modeling required, resulting in cost-effective yet targeted in-memory acceleration.

#### *Cognos Lifecycle Manager*

Cognos Lifecycle Manager is a tool used for validating report content between two versions of Cognos software during an upgrade or introducing a change to your environment.

With a workflow-driven user interface, Cognos Lifecycle Manager can create benchmark projects to compare reports from a single environment, such as a baseline snapshot for report comparison after the installation of a refresh pack, full upgrade, database upgrade or other system change. Cognos Lifecycle Manager helps reduce the effort of validating the effect of changes to your environment and enables IT to respond more quickly to new business requirements.

IIT can also validate content in multiple environments, comparing a large number of report outputs, such as PDF, HTML, XML, CSV, Microsoft Excel 2002/2007, and Microsoft Excel 2000 Single Sheet format in a single pass.

#### *Single sign-on*

The Cognos platform capitalizes on existing enterprise security providers, helping reduce administration costs while ensuring a secure environment. You can also link to one or more security systems simultaneously, as you require. The Cognos platform supports LDAP, Microsoft Active Directory, CA SiteMinder, and SAP Business Information Warehouse, among others.

This integration makes single sign-on for authentication possible, simplifying the login process and restricting access to data according to business requirements.

### **Adapt to change with a flexible infrastructure**

At the heart of the Cognos platform is its service-oriented architecture (SOA). The Cognos platform is built on a true set of peer-to-peer services and is built from the ground up.

### **Environment-neutral architecture**

The platform is based on open standards. When combined with the SOA, IT can use their existing technology standards and be confident that the environment-neutral platform will meet their future requirements as they evolve. Your company can continue to rely on the enterprise technology standards already in place, including security, operating systems, servers and data sources.

The standards-based services are interoperable and extensible through modern standard interfaces and protocols, including SOAP, XML and SQL.

### **Flexible peer-to-peer services**

The Cognos platform fits into your hardware deployment strategy, whether it is single server, multi-server, cluster or grid.

The Cognos platform can scale to fit your optimal deployment approach, with peer-to-peer services that can be located anywhere on the network. For the Cognos platform, hardware locations and operating systems are transparent. Use your existing infrastructure by installing the Cognos platform on UNIX, Microsoft Windows, Linux or any combination of these in the same configuration.

### **Single open API**

A single open API enables full access to functions. You can embed BI into other applications, such as Microsoft Office, search, mobile devices or other applications.

The internal communication between services uses the same API as that in the Cognos SDK. The single open API offers developers full access to all BI functionality to build additional value or to integrate BI into your business process management, search or other infrastructure tools.

### **Multitenant support**

To enable true cloud or other resource sharing models, the IBM Cognos platform enables your security model to be associated with all objects in the content store. You can then scale and share resources among disparate groups of users because that content can be accessed by only those who are authorized. Because this is implemented in the object model, tenant management tasks can be automated by custom Cognos SDK applications.

### **Services for specific purposes**

Every service is built for a specific use. You can control which services or group of services run on each and configure the services in your environment for optimal use. As a result, you have the flexibility to meet changing business needs.

### **Conclusion**

The Cognos platform can help reduce the complexity of your IT infrastructure, help increase your return on investment and ultimately reduce your total cost of ownership. The Cognos platform provides complete, consistent and timely information for your user communities, all on a flexible, scalable infrastructure.

For more information about the Cognos platform, visit:  
[ibm.com/software/analytics/cognos/platform](http://ibm.com/software/analytics/cognos/platform)

## About IBM Business Analytics

IBM Business Analytics software delivers data-driven insights that help organizations work smarter and outperform their peers. This comprehensive portfolio includes solutions for business intelligence, predictive analytics and decision management, performance management, and risk management.

Business Analytics solutions enable companies to identify and visualize trends and patterns in areas, such as customer analytics, that can have a profound effect on business performance. They can compare scenarios, anticipate potential threats and opportunities, better plan, budget and forecast resources, balance risks against expected returns and work to meet regulatory requirements. By making analytics widely available, organizations can align tactical and strategic decision-making to achieve business goals. For further information please visit [ibm.com/business-analytics](http://ibm.com/business-analytics).

### **Request a call**

To request a call or to ask a question, go to [ibm.com/business-analytics/contactus](http://ibm.com/business-analytics/contactus). An IBM representative will respond to your enquiry within two business days.



---

© Copyright IBM Corporation 2012

IBM Corporation  
Route 100  
Somers, NY 10589

Produced in the United States of America  
October 2012

IBM, the IBM logo, ibm.com and Cognos are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at [www.ibm.com/legal/copytrade.shtml](http://www.ibm.com/legal/copytrade.shtml).

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

It is the user's responsibility to evaluate and verify the operation of any other products or programs with IBM products and programs.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.



Please Recycle