IBM Cognos Business Intelligence
Version 10.2.0

Planning a Migration from IBM Cognos Series 7 to IBM Cognos BI

IBM
Before using this information and the product it supports, read the information in "Notices" on page 91.

Product Information
This document applies to IBM Cognos Business Intelligence Version 10.2.0 and may also apply to subsequent releases. To check for newer versions of this document, visit the IBM Cognos Information Centers [http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp].

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Introduction

This information will help you decide both how and when to migrate from IBM® Cognos® Series 7 to IBM Cognos Business Intelligence. It describes some of the situations and decisions you may face, and recommends solutions.

Note: The term “migration tools” is used extensively in this book. Migration tools refers to a number of different tools and support options available to assist with the migration of content from IBM Cognos Series 7 to IBM Cognos BI. As announced in IBM Cognos BI 10.1.1, some migration tools are deprecated in IBM Cognos BI 10.2.0. Depending on the type of IBM Cognos Series 7 content you want to migrate, you may have to migrate the content to an earlier release of IBM Cognos BI before upgrading to IBM Cognos BI 10.2.0. For more information, see “What is different in IBM Cognos Business Intelligence 10.2?” on page 1.

For information about upgrading from IBM Cognos ReportNet® or earlier versions of IBM Cognos BI to IBM Cognos BI, see the IBM Cognos BI Installation and Configuration Guide. For information about how to migrate IBM Cognos Series 7 PowerPlay® applications to IBM Cognos PowerPlay, see the IBM Cognos PowerPlay Migration and Administration Guide. For information about how to migrate other metadata and applications from IBM Cognos Series 7 to IBM Cognos BI, see the IBM Cognos BI Migration Assistant User Guide available in IBM Cognos BI 10.1.1.

Using this document

This information will help you understand

• how enhancements to IBM Cognos BI affect migration
• how IBM Cognos BI is different from IBM Cognos Series 7
• the options for managing your enterprise business intelligence environment now and in the future
• how migration to IBM Cognos BI may affect different user communities

Audience

To use this information, you should be familiar with IBM Cognos Series 7 products, your information technology infrastructure, and the business needs of the people in your organization who will use IBM Cognos BI. We recommend that you learn how to use IBM Cognos BI before starting migration. You should not use migration as a way to learn IBM Cognos BI.

This information is for Project Planners, Managers, Business Intelligence Architects, or Administrators who are responsible for planning, assessing, and implementing a strategy for their organization to migrate their IBM Cognos Series 7 applications.

Finding information

To find IBM Cognos product documentation on the web, including all translated documentation, access one of the IBM Cognos Information Centers (http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp). Release Notes are published directly to Information Centers, and include links to the latest technotes and APARs.
You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

**Accessibility features**

Accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products. The availability of accessibility features varies by component within IBM Cognos Series 7 and IBM Cognos BI.

IBM Cognos HTML documentation has accessibility features. PDF documents are supplemental and, as such, include no added accessibility features.

**Forward-looking statements**

This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

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Chapter 1. Frequently asked questions

As an IBM Cognos Business Intelligence customer, you probably have many questions about how IBM Cognos BI will affect your existing IBM Cognos Series 7 applications. You will likely want to know how you can leverage your existing IBM Cognos Series 7 investments in IBM Cognos BI.

The responses to frequently asked questions will help you understand what is involved in a migration and dispel some common misconceptions. Reading the questions and answers is a good way to gain a basic understanding of migration.

What is different in IBM Cognos Business Intelligence 10.2?

There are some changes to the migration tools available in IBM Cognos Business Intelligence 10.2.

As announced in IBM Cognos BI 10.1.1, some migration tools are deprecated in IBM Cognos BI 10.2.0. The following migration tools are not available in IBM Cognos BI 10.2.0.

- The IBM Cognos Migration Assistant command line tools are not included in the IBM Cognos Business Intelligence 10.2.0 release.
- The options to open a PowerPlay report in IBM Cognos Report Studio or IBM Cognos Analysis Studio are not available in the IBM Cognos Business Intelligence 10.2.0 release.

To migrate IBM Cognos Series 7 Impromptu® or IBM Cognos Series 7 Architect content to IBM Cognos Business Intelligence 10.2.0, use the IBM Cognos Business Intelligence 10.1.1 version of the migration tools to migrate to 10.1.1. After you migrate, upgrade the 10.1.1 content to IBM Cognos Business Intelligence 10.2.0.

You can continue to migrate IBM Cognos Series 7 PowerPlay content to IBM Cognos PowerPlay by using the Migration Assistant that is included with IBM Cognos BI PowerPlay. For more information, see the IBM Cognos PowerPlay Migration and Administration Guide.

How can I ensure a successful migration?

You understand that migrating from one product to another is sometimes difficult. You hear that it takes time, resources, and planning to migrate your existing IBM Cognos Series 7 applications. You want to understand if moving your applications will be difficult and how you can ensure a successful migration.

Migration may be challenging because you are moving applications and users from IBM Cognos Series 7 to IBM Cognos Business Intelligence and they are different products. IBM Cognos BI is not simply the next version of IBM Cognos Series 7. IBM Cognos BI is the next generation BI solution. It delivers the complete range of BI capabilities, including reporting, exploration, analysis, scorecarding, workspaces, business event management, and data integration on a single, modern architecture.

The introduction of any new technology can be disruptive to users that are familiar with an older technology. As you move applications to IBM Cognos BI, you also introduce users to a new user experience.
Not only is migration about moving your applications to IBM Cognos BI, but it also about making them work. This can mean reproducing the same IBM Cognos Series 7 application in IBM Cognos BI, or redesigning all or parts of the application to use the new functionality in IBM Cognos BI.

Several options are available to ensure that no matter what path you choose to get to IBM Cognos BI, you are successful. You will likely choose different options in different situations and for different applications.

Use the following tips to ensure a successful migration:

• Determine whether there is a business need to move your applications.
  You must understand the reasons for moving your application before you can assess the scope of your migration project. Part of this involves looking at the usage, purpose, and functionality of the applications.

• Build new applications in IBM Cognos BI.
  The best way to learn about a new product is to use it. The knowledge you gain by creating new reports or building new applications will help you understand the best strategy for your migration.

• Move pragmatically.
  To build confidence and experience, start with one area. You do not have to migrate all of your applications today.

• Use the appropriate tools.
  Migration tools are only part of the toolset that is at your disposal when you migrate. There is also documentation in Cognos Proven Practices articles, in the IBM Cognos BI Migration Assistant User Guide, and in the IBM Cognos PowerPlay Migration and Administration Guide. For more information, migration tools, and assistance, consult the Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter).
  Other solutions and utilities are available to support migration. For example, the Security Replication Tool is available from IBM Software Accelerated Value Program. This tool automates the process of copying IBM Cognos BI users, groups, and roles from an existing namespace to a new namespace. For more information, see IBM Cognos SDK Solutions and Diagnostic Tools (http://www-01.ibm.com/software/data/support/cognos_diagnostictools.html).

• Plan your strategy.
  Adequate planning and budgeting are crucial to the success of any migration project. Before you begin, take the time to define your goals, success criteria, and the potential risks.
IBM Cognos Business Intelligence is built on a Web-based, services-oriented architecture that was first delivered with IBM Cognos ReportNet. IBM Cognos BI provides secure, easy-to-deploy, zero footprint reporting, analysis, event management, workspaces, scorecarding, and data integration to all users in your enterprise.

Migration takes advantage of the features and functionality offered by IBM Cognos Business Intelligence by moving your existing reports and business rules forward. This allows you to leverage your existing investment and is a key step in establishing a standardized IBM Cognos BI environment across your organization.

Companies migrate applications for business reasons, such as to implement new functionality, consolidate existing and acquired applications after a merger or acquisition, or outsource to a service provider. They may also migrate applications to meet the needs of IT.

Gradually migrate IBM Cognos Series 7 applications and move users to IBM Cognos Business Intelligence when the time is right and you have a business requirement to do so.

Making any changes to a business-critical enterprise system requires effective and detailed planning. Migration is not just about how to use the migration tools.

IBM Cognos services can help customers move successfully from IBM Cognos Series 7 products to IBM Cognos Business Intelligence.

These services include helping you with technical requirements and application analysis. For information about the available services, see the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter](http://www.ibm.com/software/data/cognos/customercenter).

Ensure that the IBM Cognos partner you choose has experience with both IBM Cognos Series 7 and IBM Cognos BI products, and with migrations.

The Assessment Service is the recommended entry point for all IBM Cognos software migrations. As part of the Analyze phase of the Cognos Solutions Implementation Methodology (CSIM), this service provides an assessment of your existing IBM Cognos BI systems and architecture with the intent of gaining an understanding of the migration process and the effort required.

The Rapid Assessment is a subset of the full Assessment Service. It is a focused engagement designed to educate, collect information, such as inventory, application complexity, business drivers, and readiness to migrate, and recommend migration options and approaches.

The Implementation Service follows the work done in the Migration Assessment Service, delivering the migrated environment and reporting infrastructure in IBM
Cognos BI. Based on the outcome of the assessment, IBM Cognos consultants will use the CSIM, including the proven practices, to guide you through the key stages of the migration implementation.

In addition, there is an IBM Cognos Migration Implementation Roadmap based on the CSIM. This roadmap includes development activities, proven practices, tips, guidelines, and templates for migrations from IBM Cognos Series 7 to IBM Cognos BI.

The CSIM toolkit, which includes the migration implementation roadmap, is available at the Cognos Customer Center.

Should I migrate all IBM Cognos Series 7 applications to IBM Cognos BI?

You have a number of applications which were independently developed in different IBM Cognos Series 7 products, and are now independently managed. Each application is comprised of many reports, and other BI elements, and services a number of user communities. You wonder if you should move all of your IBM Cognos Series 7 applications to IBM Cognos Business Intelligence.

It is common to assume that current applications should be replicated in the new product. That assumption can be costly and, ultimately unnecessary. It is important that the information and decision-making capabilities that the IBM Cognos Series 7 applications deliver be moved to IBM Cognos BI, and not just the reports.

Deciding which applications to move to IBM Cognos BI should include the following tasks:

- Take an inventory of your existing applications. This determines the number of applications and helps identify how each application is used.
- Conduct an assessment of each application. Determine how the applications are currently being used. In some cases you will find that a significant percentage of existing applications are not used. This is especially true for older applications.
- Determine which applications should move to IBM Cognos BI. Examine each application individually to determine if it meets your current business needs. If your current needs are not being met, determine if this will change if you move the application to IBM Cognos BI. It is not necessary to move all or any existing IBM Cognos Series 7 applications if they currently meet your needs and there is no business reason to move. IBM will continue to support IBM Cognos Series 7 for as long as customers demand it and it makes business sense to do so.
- Prioritize the applications. After you identify which applications should move to IBM Cognos BI, prioritize them to determine which should be moved first. A gradual migration will minimize disruption to your users and business processes.
Related concepts:

“Recommendation - take an inventory of your existing applications to reduce the number of reports to migrate” on page 80

Examine your existing IBM Cognos Series 7 applications to see which applications are candidates for migration. You may find that you will not want to move all content to IBM Cognos Business Intelligence.

“Analyze phase” on page 79

The first phase of a migration project involves the BI architect, modeler, trainer, project management team, and project manager. Together they define what the solution needs to accomplish. They examine the features and non-functional attributes that the applications must deliver.

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**Are migration tools all I need to move key applications?**

You plan to move key applications to IBM Cognos Business Intelligence and want to know if all you need is the migration tools.

The migration tools help you take advantage of investments in IBM Cognos Series 7 applications by automating the movement of content to IBM Cognos BI. However, some manual steps may be required to recreate some IBM Cognos Series 7 objects in IBM Cognos BI. In addition, some adjustments may be required to ensure that the migrated application is the same as, or better than, the original application.

The migration tools help you to reproduce existing IBM Cognos Series 7 content in IBM Cognos BI. They may give you an advantage in moving some BI objects before you enhance them in IBM Cognos BI, but they are not required. You can recreate BI content, or migrate it without the tools.

You can easily migrate IBM Cognos Series 7 PowerPlay content to IBM Cognos PowerPlay. Cubes, reports, PPES content, Upfront content and security, as well as IBM Cognos PowerPlay content published in IBM Cognos Connection can be migrated to IBM Cognos PowerPlay using migration tools. For more information, see the IBM Cognos PowerPlay Migration and Administration Guide.

You can upgrade Transformer models to IBM Cognos 8.3 or above, taking advantage of better integration with security and data sources. Alternatively, you can continue to leverage your IBM Cognos Series 7 PowerCubes if they are being shared between IBM Cognos Series 7 and IBM Cognos BI applications.

Migration tools are only one part of the migration process and one piece of the migration toolkit. For all migrations, you should have a project plan, adequate resources, and allot sufficient time. You can also take advantage of information that is available in Cognos Proven Practices articles at the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter], in the IBM Cognos BI Migration Assistant User Guide, and in the IBM Cognos PowerPlay Migration and Administration Guide.
The migration of IBM Cognos Series 7 applications to IBM Cognos Business Intelligence can vary significantly in size and scope. Every organization discovers differences in the impact a migration has on the application and its business processes, on the user communities, and on the support structures.

When should I migrate?

You have both IBM Cognos Business Intelligence and IBM Cognos Series 7 running in your environment and want to determine the best time to move your applications. Should you wait for the next version of IBM Cognos Series 7 or IBM Cognos BI, or should you move today?

Determining when to move your applications to IBM Cognos BI depends on understanding how IBM Cognos BI fits into your environment, the business issues it solves for you, and when you need to solve these issues.

For example, if you have multiple databases and applications that are used across your company, activities such as analyses and variance reporting may be very time consuming and a manual process. IBM Cognos BI solves this problem by providing access to multiple databases and capabilities for reporting, analysis and planning on a single architecture. Only you can determine the benefit of using IBM Cognos BI to improve productivity or accuracy in reporting in these situations.

Are there any IBM Cognos Series 7 applications that would provide an even greater competitive advantage to your company if they used new functionality in IBM Cognos BI? Determining whether the functionality you require is available in IBM Cognos BI is also key to determining whether you should continue to use the existing capabilities in IBM Cognos Series 7. You will find that each application is unique and not all should be moved at the same time.

Related concepts:

Chapter 2, “How IBM Cognos BI meets your growing business needs,” on page 11
IBM Cognos Business Intelligence is built on a Web-based, services-oriented architecture that was first delivered with IBM Cognos ReportNet. IBM Cognos BI provides secure, easy-to-deploy, zero footprint reporting, analysis, event management, workspaces, scorecarding, and data integration to all users in your enterprise.

How long does it take to migrate?

You decide that you are going to migrate your applications to IBM Cognos Business Intelligence and you have chosen candidate applications. You wonder how much time you should allocate to your migration project. Can you set aside a long weekend to complete the migration?

A migration project is more than just moving your reports from IBM Cognos Series 7 to IBM Cognos BI. It also involves ensuring that the applications work after you move them and that the migrated applications continue to meet the needs of your users.

A migration project requires the same level of planning, effort, and resources as any other IT project. You must schedule adequate time to review and test the migrated applications. Migration is usually an iterative process where you migrate one defined subset of your application at a time. This helps you identify issues,
develop solutions and gain experience with the migration process. It also minimizes disruption to your business processes and to your users.

The amount of time it takes to migrate your applications depends on several factors, including the number and complexity of your applications and how the functionality maps to IBM Cognos BI functionality.

We recommend migrating your applications gradually over a period of time. This slow transition will help your users become familiar with the new technology, as you build new applications in IBM Cognos BI and maintain others in IBM Cognos Series 7.

Related concepts:
“A migration project” on page 77

Making any changes to a business-critical enterprise system requires effective and detailed planning. Migration is not just about how to use the migration tools.

What is the difference between Analysis Studio and PowerPlay Studio?

You are an IBM Cognos PowerPlay user and wonder how IBM Cognos Analysis Studio differs from IBM Cognos Series 7 PowerPlay Web functionality. Analysis Studio provides deep comparative analysis, which IBM Cognos Series 7 PowerPlay Web does not offer. IBM Cognos Series 7 PowerPlay Web offers a rich exploration experience, whereas Analysis Studio provides guided exploration.

IBM Cognos PowerPlay Studio brings the IBM Cognos Series 7 PowerPlay Web interface to IBM Cognos Business Intelligence.

One of the biggest differences between Analysis Studio and IBM Cognos PowerPlay Studio is that Analysis Studio enables analysis of information independent of where your data is stored. This means that you can analyze and report against both online analytical processing (OLAP) data sources and dimensionally-aware relational sources.

PowerPlay users who are familiar with PowerPlay Web functionality and exploration capabilities, and who expect the same functionality and exploration capabilities in IBM Cognos BI should consider moving to IBM Cognos PowerPlay Studio.

PowerPlay users who perform analysis, or deep comparative analysis, use unbalanced hierarchies, or use large data sets will find that Analysis Studio is well suited for their business needs. Consider migrating IBM Cognos Series 7 applications that would benefit from this functionality in Analysis Studio when the time is right for your business.

You can also migrate PowerPlay applications to IBM Cognos PowerPlay Studio, afterward, users can choose to move from IBM Cognos PowerPlay Studio to other IBM Cognos BI studios.

What is the future of IBM Cognos Series 7?

You worry that the company will stop supporting IBM Cognos Series 7 products.
IBM Cognos Business Intelligence is the primary platform that the company will use to strategically extend its business intelligence solutions. IBM Cognos BI is a continuation of the architecture introduced with IBM Cognos ReportNet and builds on the success of ReportNet. However, IBM is committed to developing and supporting IBM Cognos Series 7 products for years. You can expect to receive IBM Cognos Series 7 product updates through regular releases. IBM will continue to support IBM Cognos Series 7 as long as customers demand it and it makes business sense to do so.

For more information about the support status for IBM Cognos products, see the Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter).

**What is the difference between migration and upgrade?**

You want to know the technical difference between migration and upgrade.

The words migration and upgrade can be used in the context of software licenses, and the terms and conditions by which you can use the software. However, the following discussion describes the technical definitions of the migration and upgrade processes. The discussion also describes the technical differences between the two processes to ensure that the terminology and concepts used in this guide are well understood and technically precise.

The terms migration and upgrade are commonly used interchangeably, but they are different processes.

**Migration**

Migration is the process of replicating applications from one product in another product, for example, transforming existing IBM Cognos Series 7 applications to closely equivalent IBM Cognos Business Intelligence applications.

To use your existing IBM Cognos Series 7 applications in IBM Cognos BI, you must convert them so that IBM Cognos BI can use them. For any migration approach you choose, the migration tools can help you.

However, in some cases, you may want to leverage the new features and capabilities of IBM Cognos BI that were not available in IBM Cognos Series 7, and choose not to use the tools, or use the tools as a starting place from which you can rework some parts of the application.

**Upgrade**

Upgrade is the process of replacing your existing software with a newer version of the same product. For example, replacing IBM Cognos ReportNet with IBM Cognos BI is an upgrade. Opening Transformer IBM Cognos Series 7 models in Transformer 8.3 or above is also considered an upgrade.

Upgrading your applications usually does not require special tools. Your existing reports should look and behave the same in both products. However, sometimes minor changes in the product, such as a newer version of a report specification in IBM Cognos BI, or other product improvements, may mean that your reports are different. Testing and verification is an important part of upgrade. Check the installation and configuration guide for your product for more information.
**Interoperability**

While planning a migration, you can interoperate.

Interoperability is the ability of a product to work with another product. It means that you can operate the two products together in the same environment and link them so that they can share data, information, or applications. For example, you can configure IBM Cognos Connection and Upfront, the IBM Cognos Series 7 portal, to appear together. To do this, some configuration tasks are required. For step-by-step instructions, see *Using IBM Cognos Series 7 and IBM Cognos BI in the Same Environment*.

If you are using PowerCubes that include security views in both IBM Cognos Series 7 and IBM Cognos BI, you will want to remain on IBM Cognos Series 7 Transformer. Secured PowerCubes in IBM Cognos 8.3 and above are not backward compatible with IBM Cognos Series 7 PowerPlay products. However, the IBM Cognos Series 7 secured PowerCube is compatible with both IBM Cognos Series 7 and IBM Cognos BI products.

**Related concepts:**

- "Recommendation - step 5: gradually move to IBM Cognos BI" on page 34
- "Hybrid migration approach - interoperate as you migrate or enhance as you convert" on page 47

You can choose a combination of tools and manual processes when you migrate an application. In some situations you can improve an existing application during or after migration. This is called a hybrid migration approach.

- "Recommendation - step 4: set up interoperability between IBM Cognos Series 7 and IBM Cognos BI" on page 34

Set up interoperability before and during migration to provide continuity to your user communities and your business processes, exchange and reuse information, and extend the value of your existing IBM Cognos Series 7 applications.

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**Is going from IBM Cognos ReportNet to IBM Cognos BI a migration?**

You know the migration tools help you move IBM Cognos Series 7 content to IBM Cognos Business Intelligence. You are unsure if there are tools available for moving your IBM Cognos ReportNet reports to IBM Cognos BI.

Moving to IBM Cognos BI from IBM Cognos ReportNet, Metrics Manager, or DecisionStream is considered an upgrade. The tools that you need are in IBM Cognos BI and accessed either through the deployment interface in the portal or through wizards in the product.

Moving to IBM Cognos BI from IBM Cognos ReportNet requires some planning because of changes to the report specification. Follow the guidelines and instructions in the IBM Cognos BI *Installation and Configuration Guide* to ensure a successful upgrade. You may also find helpful information in Knowledge Resources articles at the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter](http://www.ibm.com/software/data/cognos/customercenter).
Chapter 2. How IBM Cognos BI meets your growing business needs

IBM Cognos Business Intelligence is built on a Web-based, services-oriented architecture that was first delivered with IBM Cognos ReportNet. IBM Cognos BI provides secure, easy-to-deploy, zero footprint reporting, analysis, event management, workspaces, scorecarding, and data integration to all users in your enterprise.

IBM Cognos BI is a performance management and business intelligence solution that addresses many of the current issues facing companies. It provides the ability for companies to meet their future growing needs for lower operating costs, standardization, global operations, and increasing agility.

Enhanced agility for competitive advantage

To have a competitive advantage, businesses must be able to adapt to changing conditions. Critical business decisions must be made sooner, faster, and more accurately. The ability of an organization to respond quickly to demands or opportunities depends on how well their decision making tools integrate with existing business processes.

IBM Cognos Business Intelligence delivers open data access as well as integration with existing and new applications, portals, security systems, and more. The IBM Cognos BI solution leverages the existing components and resources in your current infrastructure.

Architecture

The separation of the architectural components into tiers supports the secure deployment strategies used by small and large organizations, whose data and infrastructure are secured and guarded by firewalls.

The Web-based IBM Cognos Business Intelligence architecture is designed for scalability, availability, and openness. It uses platform independent, industry standards, such as Extensible Markup Language (XML), Simple Object Access Protocol (SOAP), and Web Services Definition Language (WSDL). For this reason, IBM Cognos BI can integrate with and leverage your existing technology infrastructure on multiple platforms.

The IBM Cognos BI architecture features a zero footprint, Web-based user interface for viewing, creating, and administering reports, analyses, workspaces, scorecards, and events. It has a common dispatcher and supports leading relational databases as well as industry-standard cubes and dimensionally modeled relational sources. It ensures dynamic load balancing and provides failover recovery for high availability operation. It also provides a single point of administration, as well as Web-based delegated administration. IBM Cognos BI is fully open to third-party products and custom development which you can access using the IBM Cognos BI Software Development Kit. It also integrates with Web farms and supports multilingual deployments.

IBM Cognos BI has a multi-tiered architecture. For description purposes, it can be separated into three tiers: presentations, applications, and data. The tiers are based
on business function, and are typically separated by network firewalls.

Data source support

In many organizations, data is typically fragmented, incomplete, and not readily available in a form that can be used effectively by the people who need it. IBM Cognos Business Intelligence open data strategy lets you consolidate data from any source to create a single business view of your enterprise that you can use to drive better performance.

You can source a single reporting application from heterogeneous data sources, such as multiple relational warehouses, SAP BW objects, IBM Cognos PowerCubes, PeopleSoft deployments, and real-time XML data. You can easily develop reporting applications in a development environment and deploy them on production databases. Database connections may be dynamically set at report runtime based on user prompting or session parameters. This data source flexibility allows organizations to achieve a comprehensive view of their business with their reports.

IBM Cognos BI supports reporting and analysis against a wider variety of relational and cube data sources than ever before.

Enterprise security

IBM Cognos Business Intelligence provides a security architecture that is flexible and compatible with your existing security model. It is easily integrated with authentication and cryptographic providers.

IBM Cognos BI leverages your existing enterprise security providers for user authentication. For example, users are authenticated using the corporate LDAP, NTLM, or other such provider rather than an application-specific authentication method. This eliminates extra administration overhead and the need to replicate existing security models. In addition, IBM Cognos BI allows users to use multiple
security authentication providers simultaneously. This saves you time, money, and resources and ensures that you can continue with a security approach that is already familiar to users.

IBM Cognos BI security involves the following:
- IBM Cognos Application Firewall
- IBM Cognos authentication services
- IBM Cognos authorization services
- Cryptographic services

IBM Cognos BI leverages the widest range of in-place security assets, in three critical areas: authentication, authorization, and encryption.

**Authentication**

IBM Cognos BI can use whatever authentication mechanism or provider is in place. It supports Microsoft Active Directory, Microsoft Windows NTLM, SiteMinder, LDAP, existing IBM Cognos Series 7 namespaces, or combinations of these where multiple security providers are used.

**Authorization**

You can apply security to virtually any level, including the metadata model, query subjects, rows, columns, or to the entire published BI packages. You can also apply security to specific objects, including reports, analyses, workspaces, scorecards, and agents.

**Encryption**

Apply cryptography to all information, including transient communications between services, and static and temporary data artifacts generated by the system. The standard cryptographic provider uses SSL, and includes trusted
communications with digital signing of SOAP-based messages on the BI Bus. Strong encryption of up to 168 bits is available when using enhanced cryptographic providers.

An important distinction of IBM Cognos BI cryptographic services is that, if required, all inter-service communication between services in the application tier can be fully encrypted. This ensures the highest possible level of encryption.

User capabilities

IBM Cognos Business Intelligence can be used to create many different types of reports, including lists, crosstab reports, charts, master and detail reports, workspaces, and user-designed reports.

- Consuming reports
  Reports and scorecards are accessible to casual report consumers to help them monitor corporate performance. Report consumers view, run, or schedule reports or scorecards, receive notifications, and may import reports into Microsoft Office applications.

- Ad hoc reporting
  Report authors and users create ad hoc reports using IBM Cognos Query Studio. You use Query Studio when you know where the answer is but not what it is. Ad hoc reports, also called ad hoc queries, can be created quickly, with little or no training, to meet reporting needs not covered by standard professional reports.
  Authors can save report specifications for future revision, or as templates for other new reports. Reports can be made available in interactive mode, so that users can interact with the data, or in read-only mode. Reports created in Query Studio can be viewed and edited in IBM Cognos Report Studio where an ad hoc report evolves into a managed report.

- Professional Authoring
  Report authors use Report Studio to create professional reports on behalf of the organization. Professional reports are designed to meet specific, recurring needs of business users. The reports can include complex layout and formatting for presentations and printing.
  To create a report in Report Studio, an author specifies the model that will provide data for the report. The author then builds a report specification that defines the queries and prompts used to retrieve the data. The author also creates the layouts and styles used to present the data. In addition to creating new reports, authors can modify existing reports.

- Transformer PowerCubes
  You can use Transformer to build high speed data access caches that can merge disparate data sources together into a single multidimensional source. By leveraging the IBM Cognos BI open data access strategy, a business analyst can achieve fast results creating a data source to be shared within their line of business.

- Analysis
  In IBM Cognos Analysis Studio, users can explore, analyze, and compare dimensional data. You use Analysis Studio when you don't know what the answer is or where to get it. Analysis Studio provides access to dimensional, OLAP (online analytical processing) cubes, and dimensionally modeled relational data sources. Analyses created in Analysis Studio can be opened in Report Studio and further enhanced to build professional reports for mass deployment.

- Event management
In IBM Cognos Event Studio, you set up agents to monitor your data and perform tasks when business events or exceptional conditions occur in your data that must be dealt with. When an event occurs, people are alerted to take action. Agents can publish details to the portal, deliver alerts by email, run and distribute reports based on events, and monitor the status of events. For example, a support call from a key customer or the cancellation of a large order may trigger an event, sending an email to the appropriate people.

- **Flexible access**
  IBM Cognos Mobile enables users to securely receive and interact with reports and analyses through their mobile handheld devices.
  IBM Cognos BI for Microsoft Office enables users to view, interact with, and refresh BI content within Microsoft Office applications such as Microsoft Excel, PowerPoint, and Word.

- **Scorecarding**
  In IBM Cognos Metric Studio, you can create and deliver a customized scorecarding environment for monitoring and analyzing metrics throughout your organization. Users can monitor, analyze, and report on time-critical information by using scorecards based on cross-functional metrics.

**Integrating business intelligence with existing applications**

IBM Cognos Business Intelligence provides a fully open and documented application programming interface (API). You can integrate the full range of BI capabilities into any existing system, and choose from widely used programming languages such as Java, C#, C++, or Microsoft Visual Basic.

The IBM Cognos BI Software Development Kit (SDK) exposes the same Web services API that is used by IBM Cognos BI itself. The API is also accessible using Web Services Definition Language (WSDL), and can be consumed by any programming language that understands SOAP.

**Total cost of ownership**

Getting information to users should be a simple activity. The zero footprint for business users and authors, with no Microsoft Windows desktops, Java or Web browser applets, enables IT to centrally manage installations on one platform.

IBM Cognos Business Intelligence delivers all capabilities through a zero-footprint, browser-based user interface. There is nothing to install or maintain on users’ desktops. For large organizations, which are often geographically dispersed, this means administration can be distributed, allowing local or regional administrators to handle updates for users and roles.

**Web deployability**

IBM Cognos Business Intelligence uses a zero-footprint infrastructure that supports Web-based analysis and lets you author, manage, view, and manipulate reports through a browser-based solution.

You can deploy complete enterprise reporting functionality, including ad hoc and professional report authoring, over the Web, to a large number of users. Additionally, remote and distributed Web-based administration is enabled. Maintenance and administration are cost-effective.
Table 1. Infrastructure components

<table>
<thead>
<tr>
<th>Infrastructure Component</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web server</td>
<td>IBM Cognos BI lightweight Web gateways fit into commonly and widely deployed Web servers, such as Microsoft IIS, IBM WebSphere®, Apache, and so on.</td>
</tr>
<tr>
<td>Application server</td>
<td>Leverages a company’s existing, in-place application servers, such as BEA WebLogic, IBM WebSphere, SAP J2EE Engine, or Oracle Application Server.</td>
</tr>
<tr>
<td>Firewall</td>
<td>Supports broad and secure access to all components in secured Web configurations.</td>
</tr>
<tr>
<td>Router</td>
<td>Integrates with existing, in-place load balancing mechanisms to ensure optimal use of hardware resources.</td>
</tr>
<tr>
<td>Portal</td>
<td>Integrates with widely used portal environments, such as IBM WebSphere, SAP Enterprise portal, and BEA Aqualogic. Built to integrate with portal environments that comply with Web Services for Remote Portlets (WSRP).</td>
</tr>
</tbody>
</table>

**Metadata interaction**

A single metadata foundation supports all IBM Cognos Business Intelligence capabilities.

The metadata model delivers user-friendly terms and value-added business rules to the business intelligence application. The software lets you import metadata from other popular modeling tools to leverage your existing investment, and accelerate the modeling process. In addition, IBM Cognos Transformer lets you import that same metadata for building PowerCubes.

The IBM Cognos BI solution uses a single query engine across all data sources, regardless of whether they are relational sources or dimensional sources. In conjunction with common metadata, this means users can have confidence that the numbers in their reports will match those from other departments. Additionally, the single IBM Cognos query engine leverages modern data access standards, with queries that leverage SQL 99, MDX, and BAPI.

**Global deployment to worldwide communities**

IBM Cognos Business Intelligence delivers easy global deployment to worldwide communities.

It provides multiple languages for all business user interfaces and simultaneous releases in all languages for all releases. The solution enables the delivery of multi-language reports in multiple delivery formats.

**Globalization options**

IBM Cognos Business Intelligence provides a multinational business intelligence environment in which users can access data, create reports, and view reports in different languages.

Support for global deployments is built into the metadata layer. With no coding required, metadata models can drive multilingual deployments. BI deliverables, including reports, in-depth analyses, workspaces, and scorecards, can be delivered in any language or locale, all from one Unicode server. At runtime, the local settings in a user’s browser direct IBM Cognos BI to render results in the
appropriate language, using appropriate locale settings for things such as currency symbols and the formatting of monetary values.

The sample databases provided with IBM Cognos BI use a selection of text fields, such as names and descriptions in different languages, to demonstrate a multilingual environment.

One IBM Cognos BI environment can support many languages:

• Language options for the user interface
  Individual users can personalize the IBM Cognos BI Web user interface by changing the language used for menu items, tools tips, and documentation.

• Language options for reports
  One IBM Cognos BI environment can deliver data in many languages. Individual users can choose the language used for reports. A report is authored only once, not multiple times for different languages. The report language selection is independent of the user interface language settings.
  For more information about setting up a multilingual reporting environment, see the IBM Cognos BI Administration and Security Guide.

• Unicode support
  IBM Cognos BI supports both Unicode and non-Unicode data sources.

IBM Cognos BI is a multilingual server product which allows different users to interact with the same server through a translated version of the user interface. IBM Cognos BI includes Web user interfaces translated into a wide variety of languages. Customers and partners can also use the Language Development Kit to build translations into more languages.
Chapter 3. An example of a migration

To illustrate the different approaches to migration and to introduce key concepts, we use a fictitious company named GO Company.

The examples we use are based on a compilation of real experiences of companies who migrated from IBM Cognos Series 7 to IBM Cognos Business Intelligence. We describe the GO Company corporate structure and goals, user communities, and reasons for migrating, to provide an understanding of typical migration considerations.

Example - an enterprise company that wants to migrate

Each migration project is different, but the reasons, planning, and processes for all migration projects are similar. The following example describes factors influencing GO Company’s decision to migrate.

GO Company is a distribution company with revenue numbers in the billions of dollars. It sells recreational outdoor products and accessories to over 800 customers in 21 countries and regions around the world. The company has many departments and user communities.

GO Company uses IBM Cognos Series 7 applications to run their business and recently purchased IBM Cognos Business Intelligence. The company wants to use the new capabilities in IBM Cognos BI, but they also want to leverage the functionality in their existing IBM Cognos Series 7 applications. GO Company wants to minimize the disruption that they know a migration project may cause.

GO Company’s migration situation

GO Company hired IBM Cognos Software Services to help them get started with their migration. GO Company and the service consultant both know that it is important to understand the GO Company’s corporate goals and business processes to determine how IBM Cognos BI fits into the GO Company organization.

Any BI solution that GO Company implements must meet the company goals and objectives. The corporate platform is based on sustainable and profitable business strategies, all aimed at providing customer satisfaction and success. External and internal pressures, including migration projects, influence their business strategies.

As in many companies, the CEO at GO Company wants to grow revenue and profits while reducing costs, providing quality to the GO customers in innovative ways, and delivering shareholder value. To accomplish these goals, the CEO needs a combination of planning, budgeting, reporting, strategy planning, and scorecarding tools. IBM Cognos BI delivers the complete range of BI capabilities on one architecture.

At GO Company, the IT model for software solutions design provides a framework for enterprise reporting from disparate information sources. The company’s goal is to standardize on IBM Cognos BI to reduce the cost of maintaining client installations.
All key business decisions, including whether to migrate to IBM Cognos BI, must align with the corporate vision. The CEO and CIO both consider a return on past investments vital to the financial health of the corporation. After investing resources, money, and time in developing the IBM Cognos Series 7 applications, it is important that the information and decision-making capabilities that these applications deliver be moved to IBM Cognos BI.

**GO Company's migration solution**

GO Company understands that it is not prudent for a company their size to mandate that all departments move all applications to IBM Cognos BI immediately. Instead, they plan to set up a number of migration projects in key regions across the organization and reuse proven practices discovered for future projects. Each region is responsible for assembling the team members for the migration project team.

Each project team is responsible for the following:
- project justification and approval
- project scope
- conversion tasks
- testing and pre-production quality assurance, and user acceptance testing
- user training

A successful migration requires a planned pragmatic approach. Some applications can be moved to IBM Cognos BI faster than others. Different solutions are needed for different applications. Each successful migration to IBM Cognos BI involves assessing the application characteristics and user community needs.

**Example - user communities**

The products people need, and how people use the products, depends on the task to be accomplished. The products required may change because of IT or business initiatives, or because of technological change, but the reason that people use the products and the requirement that these people be successful in their jobs does not change.

For example, GO Company deployed IBM Cognos Series 7 products across many departments in many regions to thousands of users. IBM Cognos Series 7 products deliver operational and management reports, exploration and analyses, ad hoc queries, and data visualizations. Now, for key applications, some business units in GO Company will deliver reporting and analysis in IBM Cognos Business Intelligence.

**Table 2. Target user communities**

<table>
<thead>
<tr>
<th>IBM Cognos Series 7 product family</th>
<th>BI capability</th>
<th>IBM Cognos BI user communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Cognos PowerPlay</td>
<td>Create reports</td>
<td>Professional author or Business author</td>
</tr>
<tr>
<td></td>
<td>Receive or view reports</td>
<td>Consumer</td>
</tr>
<tr>
<td></td>
<td>Explore data</td>
<td>Business manager</td>
</tr>
<tr>
<td></td>
<td>Analyze data</td>
<td>Business analyst</td>
</tr>
<tr>
<td>IBM Cognos Impromptu</td>
<td>Create reports</td>
<td>Professional author or Business author</td>
</tr>
</tbody>
</table>
Table 2. Target user communities (continued)

<table>
<thead>
<tr>
<th>IBM Cognos Series 7 product family</th>
<th>BI capability</th>
<th>IBM Cognos BI user communities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Receive or view reports</td>
<td>Consumer</td>
</tr>
<tr>
<td></td>
<td>Model metadata</td>
<td>Administrator</td>
</tr>
</tbody>
</table>

User adoption can be facilitated by involving key members of each user community in the migration project, and testing migrated applications with the user communities the applications serve.

User training is a major portion of the implementation of new software. GO Company plans to move to a production environment only after all user communities are trained and users verify the integrity of converted reports.

Consumers
Consumers form a large part of the population that use IBM Cognos Business Intelligence software to do their jobs. Consumers require easy access to reports and usually view reports published to a portal. They may receive reports by email, based on a condition or an alert, or within Microsoft Office documents.

These users are comfortable with Web browsers, email programs, and Microsoft Word. They are usually not technically sophisticated users.

An example of a consumer at GO Company is Patrick, who is a store manager. Patrick manages one of the many store franchises. Patrick’s primary responsibility is to manage the overall running of his franchise. To accomplish this, Patrick spends much of his time checking daily business reports that are generated at head office and sent to him by email. He uses this information to validate what he sees in his store to ensure anomalies are spotted before they become problems. Patrick relies heavily on IBM Cognos BI software to get his job done. It enables him to track performance easily and make timely decisions.

In IBM Cognos BI, Patrick uses Cognos Viewer.

Business managers
Business Managers are usually mid-level managers who use IBM Cognos Business Intelligence software to provide precise and complete information to senior management. This information enables both groups to make informed, timely decisions.

Business Managers are computer-savvy, comfortable with Web and Microsoft Windows applications and may use advanced features of Microsoft Excel, such as pivot tables. They explore data and may create reports for themselves and share these reports with others. They usually have domain expertise but may not understand the underlying data structures. They usually perform some ad hoc query and basic analysis.

Patti is a typical business manager at GO Company. She is one of the budgeting and forecasting managers for the warehouses in southern Europe. She consolidates, reviews, and analyses budgets for senior management and performs some ad hoc financial projections related to new warehouses, transportation, and other logistics.

In IBM Cognos BI, Patti uses IBM Cognos PowerPlay Studio.
Disconnected users

Disconnected users are a small but important segment of IBM Cognos Business Intelligence software users. They are not connected to the network when they use IBM Cognos BI software, usually because of travel requirements.

They require access to data, but are offline.Disconnected users do not have access to the internet, data sources, or the company LAN. These users are a subset of other user communities, and include consumers, business managers, and analysts.

At GO Company, an example of a disconnected user is a traveling salesperson or regional manager who requires access to reports or data while meeting with a client.

In IBM Cognos BI, mobile workers who need to access and interact with BI information on PDAs such as Blackberrys use IBM Cognos Mobile. IBM Cognos Mobile provides disconnected and offline use. Users can continue to access their reports while they are offline, allowing them to continue working while traveling or when the device is not within connectivity range.

IBM Cognos PowerPlay for Microsoft Windows users who want local access can continue to use PowerPlay for Microsoft Windows in IBM Cognos BI. PowerPlay for Microsoft Excel users can continue to use PowerPlay for Microsoft Windows, or can use IBM Cognos Analysis for Microsoft Excel.

Analysts

Business Analysts use IBM Cognos Business Intelligence products to do some exploration of data, but spend most of their time analyzing data to compare and test hypotheses and scenarios.

Analysts want to understand their customers, market trends, and their competition. They use advanced features in Microsoft Excel and are comfortable identifying trends, anomalies, and opportunities.

For example, Sylvio is a business analyst for GO Company. He designs business models that use large amounts of data to find solutions to business questions for customers and other stakeholders. His regular internal duties include forecasting market trends for products in his region, assessing customer satisfaction, and analyzing data on customer demographics. Sylvio has a lot of industry experience and performs a liaison function to report authors, developers, and other service providers.

Sylvio understands data, and how to do complex analysis. He also understands the business sector that GO Company is in. He can design business models in IBM Cognos Transformer and build his own PowerCubes. This lets him leverage the time series analysis capability of the PowerCube while merging the various sources of data within the business to find the answers he needs.

In IBM Cognos BI, Sylvio uses IBM Cognos Analysis Studio.

Professional authors

Report authors use IBM Cognos Business Intelligence products to create standard reports that provide information to consumers, business managers, and business analysts.
Report authors also develop software applications that answer business questions. Commonly the data they use comes from various database servers, such as SAP BW, Oracle, and Microsoft SQL Server. Professional authors are comfortable with sophisticated technology, including database systems, server administration, and Web application development.

Professional authors usually gather requirements from business users to create official reports and are responsible for managing the distribution of reports.

For example, Melissa is a systems analyst in the Technology Infrastructure division of GO Company. She designs and implements systems that address the needs of people throughout the company. Most of the reports she creates are simple list reports, but she also creates some crosstab reports and cubes. She may use templates as a starting point, but creates many reports from scratch. She often adds a chart to visually present the data, making it easier for people to spot trends and perform rapid analysis. She also often integrates charts into presentations or briefing books she prepares for senior managers.

In IBM Cognos BI, Melissa uses IBM Cognos Report Studio.

**Administrators**

Administrators use IBM Cognos Business Intelligence products for automating tasks, tuning and administering servers and reports, implementing security solutions, and installing or upgrading software.

For example, Ivan is one of six administrators for the Sales Department at GO Company corporate headquarters. He spends much of his time troubleshooting database problems for professional authors. Ivan maintains a personal cube from which he issues weekly problem resolution reports to his manager. Sometimes Ivan must prepare other reports for his manager and other senior managers. Ivan assists his senior database administrator in creating physical database designs, and in administering the main BI database management system (DBMS) including the optimization of the databases, performance tuning, backup, and recovery.

In IBM Cognos BI, Ivan uses IBM Cognos Administration.

**Metadata modelers**

Metadata modelers must understand the reporting requirements of their business users before they can create models.

For example, Sam is a modeler with the Finance Department. His primary responsibility is gathering reporting requirements and translating these requirements into models. Sam understands the connection between how data is in reality and how the business needs to see it. Sam has expert knowledge in data analysis techniques and is familiar with database concepts.

In IBM Cognos Business Intelligence, Sam uses IBM Cognos Framework Manager or IBM Cognos Transformer.

**Migration project strategy, goals, and success criteria**

For your migration projects to be successful, you must understand the business drivers behind them. This ensures that the project delivers the business results you expect.
It may not be an option just to move your applications, but a requirement to improve them. CEOs and CIOs expect any IT project to deliver business benefits and deliver a clear and measurable return on investment. Key success indicators measure the benefits of a project.

**Strategy**

As a global company, GO Company understands that at an enterprise scale, migrations cannot be deployed as a “big bang”. It is not feasible to migrate all existing applications at the same time to IBM Cognos Business Intelligence. The cost in terms of resources, time, and support can be prohibitively expensive.

Go Company plans to initiate several migration projects across the organization during the next several years.

**Goals**

GO Company expects to achieve the following goals when migrating to IBM Cognos BI.

- **Better technical solutions for business processes and decisions**
  IBM Cognos BI has technological improvements that drive improved business processes. For example, moving to a browser interface will reduce the time allocated for training new employees, and will enable wider access to distributed applications.

- **Reduced complexity and cost**
  Moving to IBM Cognos BI reduces the number of products and tools to install on end user computers, offers the opportunity to consolidate metadata and applications, enables the use of your corporate security system, and provides a single point of administration.

- **Increased productivity**
  IBM Cognos BI has enhanced functionality and new features, such as custom portlets that can store Microsoft Excel spreadsheets, links, and PDFs, that are easier to use and deploy.

- **Extended value of IBM Cognos Series 7 investments**
  Being able to move and improve IBM Cognos Series 7 applications means that past investments can continue to provide value.

**Success criteria**

GO Company realizes that planning and commitment of resources are required for migration projects to be successful. The measurements they have for success include the following:

- **Deliver on time**
  Similar to any IT project, it is important that migration projects are delivered on schedule and on budget.

- **The same or better applications after migration**
  When migrating applications to IBM Cognos BI, GO Company requires no loss of functionality and the target application must meet the original business requirements.

- **Minimal disruption to users or business processes**
  GO Company uses IBM Cognos BI products to run their business. It is important that there is minimal disruption to end users and to the business processes.
Reasons for migrating

Companies migrate applications for business reasons, such as to implement new functionality, consolidate existing and acquired applications after a merger or acquisition, or outsource to a service provider. They may also migrate applications to meet the needs of IT.

Examples of common IT initiatives include
- phasing out applications that are expensive to maintain
- reducing the total cost of ownership by migrating redundant or non-critical applications to a corporate standard
- improving availability of applications
- simplifying system management and administration

Example - IBM Cognos PowerPlay reduces administration costs

Migrating to IBM Cognos PowerPlay can reduce the administration costs of maintaining multiple products, without increasing your training budget.

For example, the South American office of GO Company uses PowerPlay heavily. They use PowerPlay Web as well as IBM Cognos ReportNet.

The IT department wants to migrate the entire office to IBM Cognos Business Intelligence to reduce the administration costs of multiple products. They want to upgrade the CRN applications to IBM Cognos BI, and move the PowerPlay applications and users to IBM Cognos PowerPlay. By doing so they will centralize the administration of all applications into IBM Cognos BI, and also ensure that their users remain productive. Migrating PowerPlay Web users to IBM Cognos PowerPlay Studio involves almost no training, as users will find the user experience in IBM Cognos PowerPlay Studio to be almost identical to that of PowerPlay Web.

Example - IBM Cognos BI provides a managed reporting tool for cubes

One of the main reasons for migration is to acquire the new features or functionality in IBM Cognos Business Intelligence, especially the ability to create reports using cubes as a data source.

For example, the customer services department in central Europe uses IBM Cognos Impromptu Web Reports to create reports on data from relational data sources, and uses IBM Cognos PowerPlay Web for reports on data from OLAP data sources. When a request is initiated, an analyst scopes out the effort and estimates the time to action. They use both products and some manual analysis to meet the business needs.

The migration team assesses the applications that customer services uses, chooses suitable candidates to migrate, and prioritizes the order in which to migrate them. They use a combination of lift and shift and compress and optimize to move the applications to IBM Cognos BI.
Being able to do reporting, exploration and analysis in IBM Cognos BI, regardless of where the data is stored, improved the response time for data requests. The questions that need to be answered can now be addressed in a few clicks within one product.

**Example - using the corporate security infrastructure**

IBM Cognos Business Intelligence provides a security architecture that is compatible with existing corporate security models. It easily integrates with authentication and cryptographic providers. This eliminates the extra administration overhead from replicating existing security in IBM Cognos Series 7 Access Manager.

For example, currently, the finance department in Europe uses Access Manager to replicate regional users that are in the GO Company corporate LDAP. Each time a finance employee changes jobs, new permissions must be set up in both the corporate security system and in Access Manager.

The data the finance department accesses for its reports must be secure and work with existing security providers. The finance department and IT set up a migration task force to determine which applications to migrate to IBM Cognos BI and which applications to eliminate.

By eliminating Access Manager security and enabling the standardization of security across the enterprise, it is simpler for the finance department to be in compliance with Sarbanes-Oxley at corporate head quarters and BASEL in Europe.

You can upgrade IBM Cognos Series 7 Transformer models that contain IBM Cognos Series 7 Access Manager security references to IBM Cognos Transformer. When doing so, you have the ability to re-associate your dimensional views and security filters to use your corporate LDAP.

**Example - moving to Linux**

IBM Cognos Business Intelligence is supported on Linux, and this now includes IBM Cognos Transformer.

For example, two years ago, the production and distribution department acquired a small logistics company to run its warehousing operation in northwestern Europe. For cost, stability and performance reasons, the logistics company chose Linux as the operating system for its business operations.

To leverage the hardware and software investment, GO Company decided to migrate existing IBM Cognos Series 7 applications to IBM Cognos BI on Linux.

GO Company can leverage its original investment in IBM Cognos Series 7 applications by migrating suitable applications to IBM Cognos BI.

Building PowerCubes on Linux is now possible as well. However, if your models rely on either IQDs or IBM Cognos Series 7 Access Manager security, you will want to evaluate your data source options or consider alternative platforms.
Example - reducing maintenance costs for desktop client deployments

A client-server architecture and the required regular updates is not always cost effective for IT departments. The deployment and maintenance effort required to push the application out to users is high. It is also difficult to sustain reliability and integration with other applications.

For example, the marketing department has almost two hundred IBM Cognos Impromptu users and installations dispersed geographically. Not all of the installations are the same version. This causes problems for the central IT department.

The service oriented architecture of IBM Cognos Business Intelligence enables IT departments to leverage existing infrastructure components and easily adapt to change. The zero footprint Web deployments minimize the number of components to deploy and maintain.

Example - moving disconnected users to IBM Cognos Mobile

A client-server architecture and the required regular updates is not always cost effective for IT departments. The deployment and maintenance effort required to push the application out to users is high. It is also difficult to sustain reliability and integration with other applications.

In IBM Cognos Series 7, disconnected users do not have access to the internet, data sources, or the company LAN, but can still access data stored locally on their computers.

IBM Cognos Mobile provides a solution for mobile workers who need to access information on their BlackBerry or other mobile device. IBM Cognos Mobile provides disconnected and offline use. Users can continue to access their reports while they are offline, allowing them to continue working while traveling or when the device is not within connectivity range. There is no need to build and maintain a separate mobile Business Intelligence deployment.

Remote installation and centralized administration will let GO Company distribute functionality and upgrades to users quickly. Reports viewed on a BlackBerry or other mobile device use existing metadata, security, roles, and workflows in IBM Cognos BI.
Chapter 4. Moving existing applications to IBM Cognos BI

As an IBM Cognos Business Intelligence customer, you have investments in IBM Cognos Series 7 applications that have evolved over the years. It may not be necessary to migrate all of your applications to IBM Cognos BI.

You have options. The option you choose will depend on each application and your business and user community needs.

What products do you have?

How easy it is to migrate depends partly on how similar the functionality is in the IBM Cognos Series 7 products of your existing application, compared to the functionality in IBM Cognos BI.

Applications that are created mostly with IBM Cognos Series 7 PowerPlay and are based on PowerCubes are quite straightforward to move. You should still assess your existing applications, to identify applications or reports that are no longer being used.

Applications that are created with a significant mix of Visualizer, IBM Cognos Query, IBM Cognos Impromptu and Impromptu Web Reports, or PowerPlay applications based on cubes other than PowerCubes require more planning. In these cases, you have a range of options to consider, depending on the application.

Recommendation - migrate most IBM Cognos Series 7 PowerPlay applications to IBM Cognos PowerPlay

You can easily and quickly move most IBM Cognos Series 7 PowerPlay applications to IBM Cognos PowerPlay.

You can open IBM Cognos Series 7 Transformer models in IBM Cognos Transformer, and existing PowerPlay reports can be migrated to IBM Cognos PowerPlay. The functionality of IBM Cognos PowerPlay Studio is almost identical to IBM Cognos Series 7 PowerPlay Web, and PowerPlay Client is almost identical to IBM Cognos Series 7 PowerPlay Client, so relatively little training for your users is required. Connections to other IBM Cognos Series 7 applications, such as drill-through access are maintained.

• migrate IBM Cognos Series 7 PowerPlay Web reports based on PowerCubes to PowerPlay Studio
  Migrate the reports to PowerPlay Studio using the Migration Tools. Later, you may decide to move some reports to IBM Cognos Report Studio, for managed reporting, or to IBM Cognos Analysis Studio, for deep comparative analysis.
  You can maintain drill-through access to cubes or reports from PowerPlay applications, queries from IBM Cognos Query, reports from IBM Cognos Impromptu Web Reports, reports from Impromptu, or reports from IBM Cognos ReportNet or IBM Cognos Business Intelligence.

• migrate PowerPlay Client reports to PowerPlay Client by opening them in PowerPlay Client

• migrate IBM Cognos Series 7 Transformer models to IBM Cognos Transformer
IBM Cognos BI supports cubes by publishing the cube as an IBM Cognos BI package. New cubes can be published as packages in Transformer, and existing PowerCubes can easily be published as packages using the Migration Tools.

For information about migrating PowerPlay applications to IBM Cognos BI, see the IBM Cognos PowerPlay Migration and Administration Guide.

**Example - you use PowerPlay to explore data**

Migrate your existing IBM Cognos PowerPlay Web applications to IBM Cognos PowerPlay Studio if you use them to explore data.

For example, the marketing department for GO Europe has dozens of PowerPlay reports. Marketing managers use the reports as a starting point to explore information, drilling up and down, changing dimensions, and slicing and dicing throughout the cube as they look for trends in consumer purchases and exceptions in seasonal returns. The managers use PowerPlay to perform some lightweight analysis. It is important that they have access to the data and exploration capabilities to make important decisions.

After testing PowerPlay Studio, the department migrates the reports to PowerPlay Studio, and finds that the functionality is almost identical. Some training is required to learn about the IBM Cognos Business Intelligence portal, IBM Cognos Connection.

**Recommendation - for applications other than PowerPlay, use both IBM Cognos Series 7 and IBM Cognos BI while migrating**

The recommended migration strategy for applications other than IBM Cognos PowerPlay is to use both IBM Cognos Series 7 and IBM Cognos Business Intelligence products for an interim period before completely moving to IBM Cognos BI.

Running parallel installations introduces the least risk, provides more continuity for your business processes and users, and yields more predictable results.

For example, GO Company has dozens of applications. Each application consists of several tens to thousands of reports, and is deployed to thousands of internal and external users across many departments and geographic regions. During the migration process, it is imperative that there is minimal disruption to the users.

The recommended migration approach involves the following:

- **Build new applications in IBM Cognos BI.**
  
  The best way to learn and understand a new product is by gaining practical experience. This step involved freezing application development in IBM Cognos Series 7 products and creating new applications in IBM Cognos BI. Creating new applications in IBM Cognos BI allows you to learn about the features and benefits of IBM Cognos BI and to determine which migration approach to use for your existing applications.

- **Migrate active PowerPlay applications and users to IBM Cognos PowerPlay.**
  
  Unless a PowerPlay application is no longer actively maintained, or is based on cubes other than PowerCubes, you can migrate PowerPlay applications directly to IBM Cognos Transformer and IBM Cognos PowerPlay.

- **Maintain existing IBM Cognos Series 7 applications "as is".**
If existing applications are working well, leave them in IBM Cognos Series 7 until you have a business requirement to migrate.

- Set up interoperability between IBM Cognos Series 7 applications (other than PowerPlay) and IBM Cognos BI.
  This enables you to slowly introduce parts of IBM Cognos BI to users. When migrating, most companies find that interoperability makes sense as an intermediate step.

- Gradually migrate other IBM Cognos Series 7 applications and users to IBM Cognos BI.
  As the business need arises, migrate other IBM Cognos Series 7 applications to IBM Cognos BI using lift and shift, compress and optimize, or a combination of both.

Running both products ensures that you have the applications and features you require in IBM Cognos Series 7, as well as new applications that take advantage of the expanded IBM Cognos BI functionality. By gradually introducing users and moving key business applications to the new architecture, you minimize the risk and disruption to your business.

However, there is more overhead, including administration, maintenance, and hardware associated with having two, fully functional BI environments. It also may take longer to completely replace all currently deployed IBM Cognos Series 7 applications with IBM Cognos BI applications.

The following diagram shows the recommended approach to migration. It shows that applications that are migrated to IBM Cognos BI run natively in IBM Cognos BI, and are no longer used in IBM Cognos Series 7. When you set up interoperability, the applications can use both IBM Cognos Series 7 and IBM Cognos BI, but are still IBM Cognos Series 7 applications.

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**Recommendation - step 1: build new applications in IBM Cognos BI**

Building new applications in IBM Cognos Business Intelligence allows you to learn about the features and benefits in IBM Cognos BI and to determine which migration approach to use for each existing IBM Cognos Series 7 application. The best way to learn and understand a new product is by gaining practical experience.
For example, GO Company is running both IBM Cognos Series 7 and IBM Cognos BI. The Chief Operating Officer asks the Vice President of Human Resources to work with the IT department to create a new compensation application. The Vice President asks representatives, including analysts, business managers, and modelers to collect requirements and determine which product to use to create the new application.

We recommend that the company build new applications using IBM Cognos BI. They can take advantage of features in IBM Cognos BI to build reports based on IBM Cognos PowerCubes, leveraging your corporate LDAP and other OLAP sources. At the same time, they can slowly introduce users from each user community to IBM Cognos BI. This familiarizes the user communities with the new features and user experience in IBM Cognos BI.

The company must learn about the IBM Cognos BI architecture, capabilities, features, and infrastructure to use IBM Cognos BI properly. Understanding the differences between IBM Cognos BI and IBM Cognos Series 7 will help them make informed decisions about which migration approach to use for each application.

A few examples of the benefits from creating new applications using the expanded functionality in IBM Cognos BI include being able to

- report from PowerCubes
- model PowerCubes built from IBM Cognos BI report or package metadata, using your corporate LDAP for security
- analyze and report from dimensionally modeled relational data sources, such as Oracle materialized views or IBM DB2® cube views, or Teradata aggregate join indexes
- schedule reports from OLAP cubes and relational data sources
- perform deep comparative analysis on OLAP data sources

Understanding the new IBM Cognos BI features and how the user communities intend to use them will help determine your migration strategy for each application.

**Related concepts:**

"Understanding how IBM Cognos BI is different from IBM Cognos Series 7” on page 50

IBM Cognos Business Intelligence is a major innovation that offers improvements and new features on an open, service-oriented architecture. It is different from IBM Cognos Series 7 and users must learn to do things, such as designing reports, doing comparative analysis and deploying applications, in IBM Cognos BI.

**Recommendation - step 2: migrate active PowerPlay users and applications to IBM Cognos PowerPlay**

Migrating IBM Cognos PowerPlay users and applications to IBM Cognos PowerPlay provides the benefits of the IBM Cognos Business Intelligence architecture and performance while preserving the PowerPlay user experience.

For example, GO Company has PowerPlay applications that make connections to both PowerCubes and other OLAP data sources, however PowerCubes are the only OLAP data sources supported by IBM Cognos PowerPlay.

We recommend that GO Company migrates only active PowerPlay applications that are based on PowerCubes to IBM Cognos PowerPlay. GO Company continues
to use existing IBM Cognos Series 7 applications that are based on other kinds of OLAP data sources. When the application no longer meets the company’s requirement, they can start planning to create a new application in IBM Cognos BI.

**Recommendation - step 3: keep existing applications in IBM Cognos Series 7**

Continue to use key business applications in IBM Cognos Series 7 to minimize the disruption to your business processes and provide continuity to your users.

For example, GO Company has an inventory application that is critical to their monthly forecasts. The application is large, consisting of almost 200 highly formatted reports. Some reports contain application management automation, such as metadata creation and report manipulation. There is also a large amount of cube-to-relational and report-to-report drill through. While analyzing the application, the migration project team discovers there are differences in functionality between IBM Cognos Business Intelligence and IBM Cognos Series 7 for some features.

We recommend that the company take a pragmatic approach and continue to use the existing IBM Cognos Series 7 application. They should consider interoperating rather than migrating the applications. When the application no longer meets the company’s requirement, they can start planning to create a new application in IBM Cognos BI.

**Maintain existing IBM Cognos Series 7 applications**

It is not necessary to migrate immediately. IBM Cognos Series 7 is a proven product that is used by many organizations. We are committed to supporting IBM Cognos Series 7 for as long as our customers demand it and it makes business sense.

The advantages of IBM Cognos Business Intelligence, the next generation solution, are creating a growing demand for companies to move to it. But, unless there is a business requirement to do so, it is not necessary to move existing IBM Cognos Series 7 applications to IBM Cognos BI.

**Advantages**

The main advantage in keeping complex applications in IBM Cognos Series 7 is that it provides continuity for business processes and users and therefore causes less disruption.

**Considerations**

By keeping existing applications running in IBM Cognos Series 7, your business may be missing opportunities that are available in IBM Cognos BI.

**Example - your application relies on drill through between Visualizer and PowerPlay**

If your application relies on drill through from IBM Cognos Visualizer to IBM Cognos PowerPlay, continue to use the applications in IBM Cognos Series 7.

If your application relies on drill through from PowerPlay to IBM Cognos Impromptu Web Reports or to IBM Cognos Query, it is fairly straightforward to
migrate the PowerPlay applications to IBM Cognos PowerPlay. After migration, the drill through from PowerPlay to Impromptu Web Reports or IBM Cognos Query are maintained.

For example, the marketing department for GO Americas has dozens of Visualizer dashboards that drill through to PowerPlay. The applications are key to the business processes in marketing.

Companies that have large applications with lots of drill through from Visualizer or to Visualizer, Impromptu Web Reports, and IBM Cognos Query, should stay in IBM Cognos Series 7 until there is a business requirement, such as the applications no longer meet the business needs, to move them. When you migrate Impromptu Web, IBM Cognos Query or Visualizer reports to IBM Cognos Business Intelligence, you must recreate drill through. Instead of moving the entire application, you may want to move only parts of it at one time.

**Recommendation - step 4: set up interoperability between IBM Cognos Series 7 and IBM Cognos BI**

Set up interoperability before and during migration to provide continuity to your user communities and your business processes, exchange and reuse information, and extend the value of your existing IBM Cognos Series 7 applications.

For example, the procurement department of GO Americas has IBM Cognos Business Intelligence and IBM Cognos Visualizer. They are looking for ways to extend the applications, quickly and easily.

We recommend that the department start by setting up interoperability between IBM Cognos Series 7 and IBM Cognos BI. This enables them to start realizing the benefits of IBM Cognos BI without migrating IBM Cognos Series 7.

Some interoperability options include

- using IBM Cognos Connection as the portal for both IBM Cognos Series 7 and IBM Cognos BI content
- configuring IBM Cognos Series 7 security in IBM Cognos BI for single signon

For information about how to set up interoperability, see *Using IBM Cognos Series 7 and IBM Cognos Business Intelligence in the Same Environment*.

**Recommendation - step 5: gradually move to IBM Cognos BI**

Gradually migrate IBM Cognos Series 7 applications and move users to IBM Cognos Business Intelligence when the time is right and you have a business requirement to do so.

For example, the sales department in GO Company has three critical business applications they want to migrate to IBM Cognos BI because of the comparative analysis functionality that IBM Cognos Analysis Studio provides. Each application consists of almost thirty reports, as well as cubes other than PowerCubes.

We recommend that the sales department migrate one application at a time. They should gradually migrate the cubes and reports they need using an iterative process. Migrating a sample set of representative reports and testing these reports in IBM Cognos BI provides GO Company with experience that they can use as they continue to migrate and test reports. Most successful migration projects use this approach.
Migration
Migration takes advantage of the features and functionality offered by IBM Cognos Business Intelligence by moving your existing reports and business rules forward. This allows you to leverage your existing investment and is a key step in establishing a standardized IBM Cognos BI environment across your organization.

Migrating all of your applications at once is conceptually simple, but can be risky if the differences in functionality, technology, and user experience are not properly understood.

It is important that the information and decision-making capabilities that the applications deliver be moved to IBM Cognos BI, not just the report.

When you migrate your applications, the following strategies are available:

- **Lift and Shift**
  Move batches of BI content from IBM Cognos Series 7 to IBM Cognos BI to reproduce the corresponding application in IBM Cognos BI.

- **Compress and Optimize**
  Improve existing BI content and eliminate redundant BI content by focusing on new features and technology available in IBM Cognos BI.

- **Combination of both**
  Move some BI content as is, and then take the opportunity to improve the applications using the compress and optimize strategy.

Lift and shift seems like the most logical path to IBM Cognos BI, but in practice, most customers who try to migrate all of their applications at once are not successful. Like any other IT project, a careful and methodical approach is best.

**Related concepts:**

- **“Lift and shift” on page 42**
  Lift and shift is a migration strategy that usually uses migration tools to replicate existing IBM Cognos Series 7 applications in IBM Cognos Business Intelligence, without redesigning the application.

- **“Compress and optimize” on page 44**
  Compress and optimize is a strategy for a migration to an IBM Cognos Business Intelligence application that is better suited to take advantage of IBM Cognos BI features and functionality. It identifies specific areas where IBM Cognos BI can enhance or consolidate existing IBM Cognos Series 7 assets.

- **“Hybrid migration approach - interoperate as you migrate or enhance as you convert” on page 47**
  You can choose a combination of tools and manual processes when you migrate an application. In some situations you can improve an existing application during or after migration. This is called a hybrid migration approach.

**Migration tools**
IBM Cognos Business Intelligence provides a variety of migration tools that help you automatically migrate metadata and application objects from IBM Cognos Series 7 to IBM Cognos BI.

As shown in the following table, supported migration tools exist for some IBM Cognos Series 7 products.
Table 3. Migration tool support

<table>
<thead>
<tr>
<th>IBM Cognos product</th>
<th>Migrate with tools</th>
<th>Migrate without tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Cognos PowerPlay Web</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>PowerPlay for Microsoft Windows</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>IBM Cognos Upfront</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>IBM Cognos Impromptu</td>
<td>✓</td>
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<tr>
<td>Impromptu Web Reports</td>
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<tr>
<td>IBM Cognos Architect</td>
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<tr>
<td>IBM Cognos Query</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>IBM Cognos NoticeCast</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>IBM Cognos Visualizer</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PowerPlay for Microsoft Excel</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>IBM Cognos Transformer</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Functionality is the same**

If there is a one-to-one relationship between features in IBM Cognos Series 7 and IBM Cognos BI, the migration tools programmatically migrate the functionality to IBM Cognos BI. Users have the same or similar experience in both products. For example, IBM Cognos Series 7 PowerPlay Web and IBM Cognos PowerPlay Studio have almost identical features.

**Functionality is different**

Sometimes, IBM Cognos Series 7 functionality cannot map directly to IBM Cognos BI. When this happens, the migration tools either do not migrate this functionality, or migrate the functionality, but the user experience can be different. It is important to set expectations accordingly before you start your migration project.

For example, because Impromptu is a Microsoft Windows product, and IBM Cognos BI is a Web product, some key differences exist. Impromptu reports are pixel-based and IBM Cognos BI reports are grid-based. Report consumers should be prepared to expect some differences in the appearance of migrated Impromptu reports. If you have a list in a report, the list is migrated, but it may appear different after migration.

Another example is report formatting. Report formatting in PowerPlay is migrated to PowerPlay Studio directly. However, reports that are migrated to Analysis...
Studio or IBM Cognos Report Studio handle formatting differently. Some formatting is migrated in Report Studio, but no formatting is migrated in Analysis Studio.

For more examples of mapping IBM Cognos Series 7 objects to IBM Cognos BI objects, see the IBM Cognos BI Migration Assistant User Guide.

**Functionality is not currently available**

Occasionally, there is no functional equivalent available in IBM Cognos BI for an existing feature in IBM Cognos Series 7. In these situations, you may be able to use both IBM Cognos Series 7 and IBM Cognos BI and set up interoperability.

**What to expect when you move content from IBM Cognos Series 7 to IBM Cognos BI**

Because of differences in product architecture and functionality, it is not always possible to simply reuse IBM Cognos Series 7 metadata or applications in IBM Cognos Business Intelligence.

We provide migration tools to help you take advantage of investments you have made in IBM Cognos Series 7. However, to successfully move to IBM Cognos BI, in addition to using the migration tools, additional work may be required to prepare for the migration and to test and refine the migrated content in IBM Cognos BI.

As part of the migration planning process, we recommend that you move a subset of your IBM Cognos Series 7 content and then assess the results and the amount of work required to refine the content in IBM Cognos BI. Sometimes only minor updates, such as formatting changes, are required in IBM Cognos BI. In other cases you may find that an IBM Cognos Series 7 feature that is important to you is noticeably different in IBM Cognos BI.

After testing the migration process with a subset of your IBM Cognos Series 7 content, you can decide if reusing the content saves time when developing an IBM Cognos BI application or if it is more efficient to recreate the application in IBM Cognos BI.

There are some differences between IBM Cognos Series 7 and IBM Cognos BI that can affect how IBM Cognos Series 7 content appears after migration to IBM Cognos BI. Examples of these differences include default settings, report formatting, and language support. General considerations for various migration scenarios are described in the following sections.

**IBM Cognos Series 7 products and components migrated with tools**

You can migrate the following products and components to IBM Cognos Business Intelligence using the IBM Cognos Migration Assistant tools.

**PowerCubes and Transformer models**

You can continue to use IBM Cognos Series 7 Transformer to build and maintain .mdc-format PowerCubes for use in IBM Cognos BI. You can build PowerCubes that are unsecured or secured using your IBM Cognos Series 7 namespace.

Conversely, you can use PowerCubes from IBM Cognos version 8.3 and above in Series 7 products, provided they have not been designed with IBM Cognos BI security (including Series 7 namespaces configured in IBM Cognos BI).
You can install Series 7 and IBM Cognos version 8.3 Transformer and above on the same computer, allowing for a smoother upgrade of PowerCubes. However, models saved in IBM Cognos version 8.3 and above are not backward compatible to Series 7.

Transformer 8.3 and above allow an easy upgrade path for any Series 7 model. You can simply open MDL files and save them in the newer version. When deploying these PowerCubes, you may consider the following tasks:

- Re-associate your Series 7 User Class views in Transformer to use a configured IBM Cognos BI security provider.
- Modify your data sources to point to IBM Cognos BI reports or packages, leveraging the open data access strategy and removing dependencies on IQDs or other flat files.
- Publish PowerCubes directly from the Transformer UI or command line into your own pre-defined folder structure in IBM Cognos Connection. Publishing PowerCube packages into folders allows a single cube per package in a more organized format.

For more information about upgrading Series 7 Transformer models and building IBM Cognos BI PowerCubes, see the IBM Cognos BI Transformer User Guide.

Impromptu

You can migrate IBM Cognos Series 7 Impromptu catalogs and reports to IBM Cognos BI. You use migrated catalogs as a metadata source for IBM Cognos Framework Manager.

The metadata migration tools export the IBM Cognos Series 7 metadata to an XML format file. In IBM Cognos BI, you can use the XML file as a metadata source in a Framework Manager model. After completing the catalog migration process, you can migrate Impromptu reports to Report Studio.

Impromptu Web Reports

You can migrate IBM Cognos Series 7 Impromptu Web Reports to IBM Cognos BI. You migrate Impromptu Web Reports using an IBM Cognos Series 7 Deployment Manager package as the migration source.

Before you migrate Impromptu Web Reports, you must migrate the Impromptu catalog metadata used by the reports.

Note: PowerPrompts are not migrated, but you can implement similar functionality using the IBM Cognos Software Development Kit.

PowerPlay

You can migrate IBM Cognos Series 7 PowerPlay for Microsoft Windows reports, PowerPlay Web Explorer reports, or PowerPlay for Microsoft Windows reports published to PowerPlay Web to IBM Cognos BI.

You can migrate PowerPlay applications to IBM Cognos PowerPlay, IBM Cognos Report Studio, or IBM Cognos Analysis Studio.
Vous pouvez migrer des applications PowerPlay directement vers IBM Cognos PowerPlay Studio et continuer à les utiliser comme auparavant.

Vous utilisez l’Assistant de migration pour migrer le contenu PowerPlay de IBM Cognos Series 7 Upfront ou PowerPlay Enterprise Server, ou IBM Cognos Series 7 contenu précédemment publié à IBM Cognos Connect. Une fois dans IBM Cognos PowerPlay, l’expérience utilisateur est la même que lorsque vous passez de PowerPlay Web à PowerPlay Studio, ou de IBM Cognos Series 7 à IBM Cognos BI versions PowerPlay Client. Pour plus d’informations sur la migration de rapports vers IBM Cognos PowerPlay, consultez le IBM Cognos PowerPlay Migration and Administration Guide.

Dans IBM Cognos BI, toutes les sources de données sont accédées via des packages. Le package contient les informations de connexion qui identifient la source de données, telle que la cube ou les informations de connexion de base de données. Les informations de connexion de cube incluent la localisation du cube sur votre système de fichiers.


Migrating from PowerPlay to other IBM Cognos BI Studios

Vous pouvez migrer IBM Cognos Series 7 et IBM Cognos PowerPlay applications to Report Studio or Analysis Studio to take advantage of the benefits available in those studios.

Report Studio provides functionality to create statement-style reports that deliver timely and accurate information required for performance management. Analysis Studio provides deep, comparative analysis and the functionality to solve business problems. It provides access to:
- Large amounts of data
- Dimensionally-modeled relational data
- More data sources, such as cubes from other providers
- Additional calculations, such as average, count, and variance

Lorsque vous migrez IBM Cognos Series 7 PowerPlay rapports vers IBM Cognos PowerPlay, toutes les fonctionnalités et apparence sont préservées ; cependant, lorsque vous ouvrez le rapport dans Report Studio ou Analysis Studio, vous pouvez noter quelques différences. Les différences dépendront de la complexité du rapport, et les fonctionnalités utilisées dans PowerPlay ne sont pas nécessairement disponibles dans Report Studio ou Analysis Studio. Vous devez comprendre les avantages de chaque studio IBM Cognos BI, et comment ils varient les uns des autres. Par exemple,
- Si un rapport est exécuté et visualisé avec fréquence sans besoin d’explorer ou d’analyser les données dans le rapport, Report Studio est le target approprié
- Si un rapport a des caractéristiques telles que des formats complexes, Report Studio est le target approprié
If a report is used as a starting place for exploration or discovery, PowerPlay Studio is the most appropriate target.

If a report consumer needs to analyze the information in a report to understand a problem or gain insight into the business by looking at different perspectives of the data, Analysis Studio is the most appropriate target.

There are two methods for migrating PowerPlay reports to Report Studio and Analysis Studio:

- You can use the Migration Assistant to migrate a set of PowerPlay reports from the IBM Cognos Series 7 environment to the IBM Cognos BI environment.
- You can migrate IBM Cognos Series 7 PowerPlay reports that were published to IBM Cognos Connection (interoperability between IBM Cognos Series 7 and IBM Cognos BI), or you can migrate PowerPlay Studio reports to Report Studio or Analysis Studio. To use this option, in either IBM Cognos Connection or PowerPlay Studio, select either Open with Analysis Studio or Open with Report Studio from the available actions. The report is migrated to the studio you used to open the report, and you can choose whether or not to save the migrated report. The original PowerPlay report is still available in IBM Cognos Connection whether or not you save the migrated report.

If you migrate reports to Analysis Studio and you find that functionality is missing in some reports, run the migration again to migrate the reports to Report Studio. If Analysis Studio was not the appropriate target studio, opening the report migrated to Analysis Studio in Report Studio does not restore lost functionality. You must repeat the migration process and specify Report Studio as the target studio.

### Upfront

You can migrate Upfront content to IBM Cognos BI. The migration process maps the Upfront content structure and security to an IBM Cognos Connection folder structure.

By preserving the existing Upfront organization, it is easier to complete administrative tasks, such as applying security to the migrated content.

### Architect

You can migrate IBM Cognos Series 7 Architect models for use as a metadata source for IBM Cognos Framework Manager.

### Security

You can include IBM Cognos Series 7 security information when you migrate IBM Cognos Web-based content in Upfront.

The migration process supports IBM Cognos Series 7 Access Manager namespace schema version 15.2 or later.

If you configure IBM Cognos BI to use the same namespace as IBM Cognos Series 7, you maintain other security settings:

- Impromptu catalog security such as table filters and access permissions, including when these security settings are inherited in an Impromptu report. The user classes in the catalog must exist in the IBM Cognos Series 7 namespace.
- Architect model security
Migration does not include database signons.

If you decide to change authentication sources, use IBM Cognos BI namespace groups and roles when applying application-level security. You then manage the membership of these IBM Cognos namespace groups and roles using the users, groups, and roles from your authentication source. This method ensures that you redefine the memberships for the IBM Cognos namespace groups and roles only if the authentication source changes.

For more information, see the IBM Cognos Administration and Security Guide.

You can upgrade Series 7 Transformer models containing IBM Cognos Access Manager security and you can continue using that same security if desired. To do this, you must configure IBM Cognos BI against the same Series 7 Access Manager namespace that the upgrading Transformer model uses. You can only use IBM Cognos BI PowerCubes built with Series 7 security in IBM Cognos BI products, because the security has been upgraded to use IBM Cognos BI unique IDs for each user class.

For more information, see the IBM Cognos BI Transformer User Guide.

**IBM Cognos Series 7 products and components not migrated with tools**

The IBM Cognos Migration Assistant tools do not migrate the following IBM Cognos Series 7 products and components. However, you can duplicate most content or functionality in IBM Cognos Business Intelligence.

**IBM Cognos Query**

The Migration Assistant does not move IBM Cognos Query objects, such as saved queries, to IBM Cognos BI. The migration log file identifies IBM Cognos Query objects found in the migration source.

You can duplicate most IBM Cognos Query functionality in IBM Cognos BI. Foundation queries are available in IBM Cognos BI when you migrate an IBM Cognos Series 7 Architect model. Also, you can manually replicate saved queries using SQL components in IBM Cognos Report Studio.

**IBM Cognos Visualizer**

The Migration Assistant does not move IBM Cognos Visualizer objects to IBM Cognos BI. You can duplicate most IBM Cognos Visualizer functionality using the charting, layout, and formatting options in IBM Cognos Analysis Studio or Report Studio.

**IBM Cognos NoticeCast**

The Migration Assistant does not move IBM Cognos NoticeCast objects to IBM Cognos BI. You can duplicate most alert and notification functionality using IBM Cognos Event Studio.

**IBM Cognos Web Services**

The Migration Assistant does not move IBM Cognos Web Services objects to IBM Cognos BI. You can duplicate most IBM Cognos Web Services functionality using the IBM Cognos Software Development Kit.
**PowerPlay for Excel**

You can export an IBM Cognos PowerPlay query from your spreadsheets and convert it to an Analysis Studio or Report Studio report.

To work with values in spreadsheets, you can duplicate your PowerPlay for Microsoft Excel functionality using IBM Cognos Analysis for Microsoft Excel.

**IBM CognosScript**

The Migration Assistant does not move IBM CognosScript objects to IBM Cognos BI. You can duplicate automation functionality using the IBM Cognos Software Development Kit.

**IBM Cognos Portal Services**

The Migration Assistant does not move IBM Cognos Portal Services objects to IBM Cognos BI. You can duplicate most IBM Cognos Portal Services functionality using IBM Cognos Connection.

**Lift and shift**

Lift and shift is a migration strategy that usually uses migration tools to replicate existing IBM Cognos Series 7 applications in IBM Cognos Business Intelligence, without redesigning the application.

The lift and shift strategy is commonly used when there may not be a feature or functionality benefit in rewriting the report in IBM Cognos BI. Moving to IBM Cognos PowerPlay is usually a lift and shift migration.

**Advantages**

A major advantage when doing a lift and shift migration is that you can use the migration tools to assist you with most of the work in replicating your reports and metadata in IBM Cognos BI. The focus is on moving batches of BI assets automatically and efficiently. The effort involved in using the tools is minimal, and some companies have chosen to outsource this effort.

**Considerations**

If you want to use migration tools, consider that they may not move everything automatically. You may have to manually recreate some objects in IBM Cognos BI.

If you use only lift and shift, you may not benefit from IBM Cognos BI features and capabilities.

If a feature is not available, or behaves differently in IBM Cognos BI, additional work after the initial migration may be required, or you may want to reconsider using a lift and shift strategy. You should reevaluate the use of a lift and shift approach when you know how the differences in product behavior will affect you.

You must test the applications that you move to ensure that the results meet your needs and expectations.
Best candidates

Lift and shift works best with the following candidates:

- PowerPlay applications
- simple applications
- simple IBM Cognos Impromptu Web reports
- simple reports

Examples are list reports or reports that may not benefit from the new features in IBM Cognos BI and reports which are highly standardized, regulated, and simply structured.

- reports with limited interoperability with other IBM Cognos Series 7 products and applications

Heavy reliance on drill through may require adjustments after migration.

The best possible outcome when using the lift and shift strategy is that the same application is reproduced IBM Cognos BI. A less attractive outcome is that you may experience a difference in functionality.

Resources

After deciding that an application is suitable for using the lift and shift approach, every report in the application is migrated using the migration tools. Typically, more collateral is moved when you choose this approach. Most of the effort is spent after the conversion to test that the application meets your business needs.

Related concepts:

"What to expect when you move content from IBM Cognos Series 7 to IBM Cognos BI" on page 37

Because of differences in product architecture and functionality, it is not always possible to simply reuse IBM Cognos Series 7 metadata or applications in IBM Cognos Business Intelligence.

Example - moving Impromptu and Impromptu Web Reports using lift and shift

If you want all of your new reports to mirror the legacy reports in format and output, you can use the lift and shift strategy for suitable candidates.

For example, the production and distribution warehouses for GO Company use IBM Cognos Impromptu and Impromptu Web Reports as their reporting software. They use three applications, each consisting of a few hundred reports. The reports are simple with limited functionality and basic formatting. The Manager of Operations wants all migrated reports to look and behave the same as the legacy reports to minimize training and accelerate user adoption.

After assessing the applications and determining that content can be moved to IBM Cognos Business Intelligence using the migration tools, the migration project team migrates a selection of sample reports to IBM Cognos BI using the migration tools and a lift and shift strategy. Over a few months, the migration team converts six catalogs and 500 reports, and tests the results in IBM Cognos BI.

As a result, in pre-production, users did not see any differences between the old and new reports.
Compress and optimize

Compress and optimize is a strategy for a migration to an IBM Cognos Business Intelligence application that is better suited to take advantage of IBM Cognos BI features and functionality. It identifies specific areas where IBM Cognos BI can enhance or consolidate existing IBM Cognos Series 7 assets.

Rather than duplicating existing applications in IBM Cognos BI, you do a full assessment of the business requirements. You investigate how IBM Cognos BI can fulfill the requirements. The focus is on new features in IBM Cognos BI and how to improve the existing application and eliminate unnecessary elements.

Advantages

The advantages of using the compress and optimize approach include

- **better applications**
  By taking advantage of the new features and capabilities in IBM Cognos BI, you use your IBM Cognos Series 7 applications as a foundation to develop applications that better fit your current business needs. The new applications are optimized for IBM Cognos BI. It allows you a chance to design your metadata models for better reporting.

- **reduction of collateral**
  When you compress and optimize, you may consolidate many IBM Cognos Impromptu catalogs into a smaller number of Framework Manager models and eliminate redundant reports.

These advantages are accompanied by lower maintenance and support costs and enhanced usability.

Considerations

Look at compress and optimize as an opportunity to improve legacy applications, rather than a major redesign effort. You can use the migration tools to give you a head start.

Compress and optimize requires effort and time up front and affects many user communities, including modelers, report authors, consumers, business analysts, and IT professionals.

Best candidates

When there is a business requirement to redevelop or significantly change your existing applications, use the compress and optimize strategy. It is also well suited for reports where there are no tools to programmatically migrate features, such as saved queries in IBM Cognos Query or IBM Cognos Visualizer visualizations. For more information about mapping objects from IBM Cognos Series 7 to IBM Cognos BI, see the IBM Cognos BI Migration Assistant User Guide.

Resources

Compared to lift and shift, compress and optimize costs more in time and resources at the beginning of a project. It also requires investment in planning and interviewing to understand the requirements. A substantial amount of work and skilled resources are required to study reports to assess the way the application works in IBM Cognos Series 7 and to determine how the application can be
improved in IBM Cognos BI. Sometimes there is no direct mapping of features between IBM Cognos Series 7 and IBM Cognos BI and as a result it takes time to determine how applications will work.

After the initial redesign work is done, there are cost reductions. There is usually a reduction in the number of reports, which in turn reduces maintenance and support efforts. The usability of the application commonly improves because the application is redesigned specifically to meet certain business needs.

**Recommendation: enable auditing in IBM Cognos Series 7 administration tools to track usage information**

In the server administration tools for IBM Cognos Series 7 products, you can enable auditing for servers, cubes and reports. When you enable auditing, activity information is continuously recorded in log files.

For example, the marketing department in GO Company is planning to move reports to IBM Cognos Business Intelligence. They want to move only reports that are regularly used and are critical to their department.

We recommend that the marketing department enable auditing in their server administration tool some months before they want to migrate. Doing this ensures that there is enough data to understand true usage patterns. The information collected in the logs will allow them to identify user information, such as users, user class, source analyzed, and the number of times the source was accessed, dimension counts for each dimension in a cube, the reports that are run or viewed, at what time and how often.

Collecting this information helps you identify which reports are heavily used and is the first step in a compress and optimize strategy.

**Example - using compress and optimize to reduce the number of Impromptu Web Reports migrated to IBM Cognos BI**

After assessing your applications, you may see opportunities to improve your IBM Cognos Series 7 applications.

For example, during the conversion phase of a migration project, the GO warehouses in central Europe converted over 200 IBM Cognos Impromptu and Impromptu Web reports to the new IBM Cognos Business Intelligence format. In the analysis phase, after consulting with the primary users of the reports, it became apparent that redundancies could be eliminated.

The project team uses the compress and optimize approach after using the migration tools during the initial conversion. All unused reports are eliminated, similar reports are consolidated and some reports are redesigned to change hard-coded inputs to links or prompts.

As a result of using the compress and optimize strategy, 70 percent of the reports are eliminated.

**Example - using compress and optimize to Migrate Impromptu catalogs to Framework Manager**

A lot of planning goes into creating an IBM Cognos Framework Manager model and you may not want to structure your model the same way that you structured your IBM Cognos Impromptu catalog.
For example, the sales department in the southeast region of GO Americas is migrating their applications to IBM Cognos Business Intelligence. They use at least one Impromptu catalog for each business sector. The Information Systems and Technology (IS&T) department does not want to continue supporting the use of so many catalogs when the sales department application moves to Framework Manager. During the analysis phase of the migration project, IS&T wants to work with the sales department to look at the structure of the catalogs and determine if they can improve and consolidate the metadata.

While there is a tool to help migrate the Impromptu metadata, the company does not want to reuse a multiple-catalog design in Framework Manager. Unlike when using Impromptu, the sales department is not limited to a single database in Framework Manager. Framework Manager allows them to create a single model for their data warehouse solution. Keeping everything in a single model supports the "single version of the truth" concept.

As a modeling tool, Framework Manager is much more powerful than Impromptu. The models are better when designed in Framework Manager using the best practices for modeling. The sales department can use one model with many packages produced from it based on the topic of the content. They must be careful how they consolidate catalogs, otherwise they may not be able to use the migration tools to move the reports that use the metadata.

**Example - using compress and optimize to redesign reports that use unsupported features**

If your IBM Cognos Series 7 applications use features that are not available in IBM Cognos Business Intelligence, you can change the application to use different features that are available.

For example, a small team in the customer services department for GO Company in southern Europe produces reports for their region that use hotfiles. The reports use sub reports, where the front-end is PowerPrompts applications. The migration project team knows that the customer services department relies on these reports.

In situations where existing IBM Cognos Series 7 applications contain functionality that is not the same as the functionality in IBM Cognos BI, we recommend the compress and optimize strategy. Examine alternative ways to achieve the same or better results. For example, replace the use of IBM Cognos Impromptu hotfiles by creating query subjects in the Framework Manager model, and then define the appropriate SQL, eliminate sub reports by using master-detail relationships, or replace PowerPrompts with prompt pages.

Redesigning the application for the platform on which it runs often leads to a better application.

**Example - using the migration tools and the compress and optimize strategy**

You can use the migration tools as a development "head start" when you plan to use the compress and optimize strategy. This can reduce the time and effort involved in a migration.

For example, the sales department in GO Company is planning to migrate some of their sales reports to IBM Cognos Business Intelligence. Using auditing information, they want to consolidate some reports that are regularly used by their sales representatives.
The sales department can use the migration tools to move parts of the report to IBM Cognos BI before reworking the reports to run optimally in IBM Cognos BI. This helps the team become familiar with the migration tools and may reduce the time spent reworking some report objects from scratch.

**Hybrid migration approach - interoperate as you migrate or enhance as you convert**

You can choose a combination of tools and manual processes when you migrate an application. In some situations you can improve an existing application during or after migration. This is called a hybrid migration approach.

Two common hybrid migration approaches are as follows:

- interoperate as you migrate
- enhance as you convert

**Interoperate as you migrate**

In most situations, you will continue to use IBM Cognos Series 7 while selected members of your user communities become familiar with IBM Cognos Business Intelligence. You can set up interoperability and use both products together.

There are different types and levels of interoperability, including the following:

- a single portal for IBM Cognos Series 7 and IBM Cognos BI
  You can embed Upfront in IBM Cognos Connection and access IBM Cognos Series 7 content from IBM Cognos Connection. This enables users to go to a single place for all of their BI information.
- IBM Cognos Series 7 security in IBM Cognos BI for single signon
  You can set up single signon by ensuring that both IBM Cognos BI and IBM Cognos Series 7 use the same IBM Cognos Series 7 namespace as their authentication source. Alternatively, ensure that you configure the authentication namespaces for both IBM Cognos BI and IBM Cognos Series 7 to use an external single signon mechanism for authentication. When doing this, ensure that the PowerCubes are either built using IBM Cognos Series 7 Transformer (secured or unsecured) or are built with no security except password protection on the cube in IBM Cognos Transformer.

For more information about configuring and setting up your environment for interoperability, see the *IBM Cognos Series 7 and IBM Cognos Interoperability Step by Step Guide*.

**Enhance as you convert**

Migrate suitable applications to IBM Cognos BI using the migration tools. Then, after you test the application and confirm that it works properly, you can add functionality from IBM Cognos BI to extend the application. You can also remove unnecessary reports, or consolidate reports that are similar. In this approach, you use lift and shift to move BI assets to IBM Cognos BI and then use compress and optimize to improve the application.

In other situations, you can use the migration tools to give you a head start in redesigning parts of your application to use IBM Cognos BI functionality.
**Summary - ideal candidates for each migration option**

Depending on your requirements and your application characteristics, each migration option provides different benefits and considerations. Most migration projects use a combination of the options.

The following table provides a summary of the migration options.

*Table 4. Migration options*

<table>
<thead>
<tr>
<th>Description</th>
<th>What do you do?</th>
<th>Good candidates</th>
<th>Advantages and considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lift and Shift</td>
<td>Recreate existing application in the new environment</td>
<td>Highly standardized, regulated, simply structured reports</td>
<td>Requires less end user training, use of automation tools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IBM Cognos PowerPlay applications</td>
<td>No new IBM Cognos Business Intelligence features, possibility of perpetuating inefficient reports</td>
</tr>
<tr>
<td>Compress and Optimize</td>
<td>Redesign application in the new environment using new features</td>
<td>Large Impromptu or Impromptu Web Reports with long histories, applications using dashboards in Visualizer, or events in NoticeCast</td>
<td>Fewer reports to maintain, more usable and efficient reports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Requires knowledge of IBM Cognos BI features and best practices</td>
</tr>
<tr>
<td>Interoperate</td>
<td>Use IBM Cognos BI for new applications, and continue to use IBM Cognos Series 7 for applications that are working and critical</td>
<td>IBM Cognos Series 7 security for Visualizer, IBM Cognos Query, and Impromptu Web Reports in IBM Cognos BI, IBM Cognos Series 7 and IBM Cognos BI portal integration</td>
<td>Uses the best of both IBM Cognos BI and IBM Cognos Series 7 functionality, gradually transition users while maintaining continuity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total cost of ownership may increase with more hardware, maintenance, and support</td>
</tr>
</tbody>
</table>
Chapter 5. Assessing your BI applications

Changes such as migrating applications to a new product architecture may create alignment gaps between IT infrastructure and business goals.

Inconsistencies in technology, processes, and people skills can weaken infrastructure stability, lower operational efficiency, and ultimately impact profitability. As part of a migration project, you should assess both your current IT environment and your existing applications separately, to ensure that the infrastructure can support your business objectives, both today and in the future.

Procedure

1. Understand how IBM Cognos Business Intelligence is different from IBM Cognos Series 7.
   IBM Cognos BI uses different hardware and software, provides a new way to develop and distribute applications, and is administered, deployed, and maintained more easily than IBM Cognos Series 7.

2. Assess your user communities requirements.
   How your users use applications is an important factor when you examine how user communities influence your migration strategy, and how they are impacted by migration choices.

3. Evaluate the existing platform and environment.
   IT infrastructure is the foundation upon which BI systems are built, maintained, and used. As IT organizations implement BI solutions, a balance must be struck between meeting business user requirements and fitting within the current and future IT environment. During the infrastructure assessment, you gather information to understand which areas of your environment are ready for the migration and which areas require more attention before migration.
   Evaluate your IT infrastructure including computer servers, desktop hardware, operating systems, storage, security, and networks, along with the people, processes, and tools that manage the infrastructure. Identify issues with the client environment, LAN infrastructure limitations, and server systems.

4. Take an inventory of existing applications.
   Complete a detailed assessment of your IBM Cognos Series 7 applications before starting a migration. The usage, age, size, and complexity of your IBM Cognos Series 7 applications are important factors to consider when planning the migration. The total size of the applications has an impact on the time required to complete the migration.

5. Evaluate the complexity of the applications.
   You must understand the complexity of your applications to set appropriate and accurate expectations for the migration. A detailed assessment can take several weeks to complete for large applications.

6. Assess the technical readiness to migrate.
   Review migration approaches, the IT infrastructure, and applications to assess your technical readiness to migrate. Identify the gaps and deficiencies with regard to supporting the migration project requirements, and evaluate your capabilities to create, support and enhance the technology and business solution. Recommend action plans to mitigate the gaps, risks, and issues.
**Results**

The result of evaluating the IT infrastructure and application characteristics is a report on how well the IT infrastructure supports the business, and what specific actions you should take to improve alignment, performance, and cost. As part of planning your migration, you can consult the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter](http://www.ibm.com/software/data/cognos/customercenter) for more information, migration tools, and assistance.

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**Understanding how IBM Cognos BI is different from IBM Cognos Series 7**

IBM Cognos Business Intelligence is a major innovation that offers improvements and new features on an open, service-oriented architecture. It is different from IBM Cognos Series 7 and users must learn to do things, such as designing reports, doing comparative analysis and deploying applications, in IBM Cognos BI.

Understanding how IBM Cognos BI is different than IBM Cognos Series 7 helps you choose the correct migration options, set expectations, and design applications that are optimized to run on IBM Cognos BI.

**Architecture**

The IBM Cognos Series 7 solution contains a set of products. You can use these products individually or in any combination to provide an integrated solution that meets your business intelligence needs.

Each of these products includes both client and server components, from data modeling and authoring tools to server components that can make your IBM Cognos data available across the enterprise. Each IBM Cognos Series 7 product has a different client-server architecture and may use proprietary application servers and storage formats.

For example, as shown in the following diagram, you can maintain distinct applications that share the same Upfront NewsIndex by using multiple server groups. You can have more than one server group per product, each with its own separate data store, but all can use a common portal. You can install server groups on multiple computers, or install multiple instances of a server group on the same computer.
Like IBM Cognos Business Intelligence, IBM Cognos Series 7 Web products use a three-tier architecture, with the graphical user interface, application servers, and data on separate tiers. However, IBM Cognos BI uses a common, service-oriented architecture for all BI capabilities to support the requirements of business processes and users. There is one central relational database to store all application content. For more information, see the IBM Cognos BI Architecture and Deployment Guide.

The following diagram shows a detailed view of an IBM Cognos BI installation in which all services are installed on a single computer. Each service is independent of other services, and receives requests from a dispatcher.
Data access

In IBM Cognos Series 7, the metadata you use is different for each product. You are limited to one database or data source for each model, and the metadata is not stored centrally.

IBM Cognos Business Intelligence provides a common business model and open data access for all users across an organization. Full capabilities are available regardless of where your data is stored, including reporting from OLAP sources and analysis from relational sources. This is a change from data silos that may have existed in the IBM Cognos Series 7 environment where IBM Cognos PowerPlay is limited to OLAP data sources and IBM Cognos Impromptu is limited to relational data sources.
In IBM Cognos BI, you access data from packages, published from IBM Cognos Framework Manager or IBM Cognos Transformer models, to create reports and ad hoc queries. A package can access more than one data source. When you add security and multilingual capabilities, each package can serve the reporting, ad hoc querying, and analysis needs of a particular group. For example, if your data source contains information from different areas of a business, you might decide to create different packages for Human Resources and Finance. In addition, you can add security so that users see only information that they have been granted access to, based on their group or role.

IBM Cognos BI supports relational, dimensionally modeled relational (DMR), and online analytical processing (OLAP) models.

**Managed reporting**

Managed reporting provides a centralized method of report creation and distribution. Managed reports are created by professional report authors for other users, or consumers.

The reports can be simple or complex and are often scheduled or burst to many users. If you are moving from IBM Cognos PowerPlay, you may choose to move some PowerPlay applications or users to managed reporting instead of exploration.

Reporting is done differently in IBM Cognos Business Intelligence than in IBM Cognos Series 7. In IBM Cognos BI, managed and ad hoc reporting is done in the Web-based studios, and the reports and queries are stored in the content store. In IBM Cognos Series 7, you author reports in IBM Cognos Impromptu or PowerPlay before publishing them to the portal.

IBM Cognos BI enables novice users to run structured ad hoc reports and perform reporting queries. It enables power users and developers to build applications and reporting templates quickly and easily. It enables report authors to reuse reporting objects to apply filters, fields, and styling to ad hoc reports. IBM Cognos BI allows you to change the language of the user interface and report content depending on the user's native language.

**Exploration**

Exploration is qualitative, done by inspection, and usually begins with a partial definition of the search criteria and an unknown amount of data.

As patterns, trends, and exceptions are discovered, the search criteria are refined and the amount of data may change. Usually some effort is required to focus attention on relevant aspects of your data before analysis can begin.

OLAP (online analytical processing) exploration refers to the term slicing and dicing to describe the ease with which you can change context and view details. For example, you look at revenue for the years 2003 to 2007 by sales region. You notice a dip in the revenue for 2006. By focusing on 2006, you can drill down to show revenue results by quarters for 2006. You can easily change the view from quarters for 2006 to sales personnel by replacing quarters with sales personnel in your analysis.

Business managers who use IBM Cognos Business Intelligence products to perform exploration and only light analysis may prefer the simplicity and usability of IBM Cognos PowerPlay. PowerPlay performs well with smaller amounts of data, while IBM Cognos Analysis Studio performs well with larger amounts of data, flat
dimensions, and when you are doing comparative analysis. PowerPlay and Analysis Studio each deliver a unique user experience.

**Working with Microsoft Office**

The IBM Cognos Business Intelligence for Microsoft Office functionality of IBM Cognos BI allows you to consume and embed existing reports within Microsoft Office documents.

In addition, IBM Cognos Analysis for Microsoft Excel enables Excel-based analysis and reporting by allowing dynamic access to IBM Cognos BI data from within Excel. This functionality is similar to IBM Cognos PowerPlay for Microsoft Excel, but is extended to all dimensional data sources supported by IBM Cognos BI.

**Analysis**

Applying techniques to describe, summarize, and compare data, and draw conclusions is part of data analysis. Business analysts seek to understand how the answer varies when comparing different scenarios, or testing hypotheses.

With analysis, it is possible to see trends and understand anomalies or variances that may not be evident by simply exploring data. Analysis is more quantitative than exploration, using statistics or math to understand relationships and relative importance of data items. You create custom sets to look for common elements between different things.

Business analysts who prepare models to answer questions and test hypotheses usually find the functionality in IBM Cognos Analysis Studio better suited to their goals than IBM Cognos PowerPlay. Analysis Studio can do deep comparative queries and can use dimensionally modeled relational or OLAP data sources.

**Feature differences**

IBM Cognos Business Intelligence provides different features than IBM Cognos Series 7. Some features in IBM Cognos Series 7 are the same in IBM Cognos BI, while other features are different, but functionally equivalent. Occasionally, there is no functional equivalent.

The migration tools work best when there is a direct mapping of functionality between IBM Cognos BI and IBM Cognos Series 7. For example, IBM Cognos PowerPlay Studio maps very closely to IBM Cognos PowerPlay, so migration is smooth. If there is reasonable mapping, the migration tools attempt to map the functionality. For information about mapping IBM Cognos Series 7 objects to IBM Cognos BI objects, see the IBM Cognos BI Migration Assistant User Guide.

If a feature or functionality in IBM Cognos Series 7 that is critical to your application is not currently available in IBM Cognos Business Intelligence, use interoperability between IBM Cognos Series 7 and IBM Cognos BI.

The following table suggests strategies based on whether IBM Cognos Series 7 functionality is the same, different, or not yet available in IBM Cognos BI.

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<table>
<thead>
<tr>
<th>Functionality</th>
<th>Default strategy</th>
<th>Other strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same</td>
<td>Lift and Shift</td>
<td>Compress and Optimize to take advantage of new IBM Cognos BI features.</td>
</tr>
</tbody>
</table>
Table 5. Strategies based on functionality (continued)

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Default strategy</th>
<th>Other strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different</td>
<td>Compress and Optimize</td>
<td>Lift and Shift and use alternate product features to provide equivalent business functionality.</td>
</tr>
<tr>
<td>Not Available</td>
<td>Interoperate</td>
<td>Compress and Optimize or Lift and Shift.</td>
</tr>
</tbody>
</table>

**Architecture and topology**

Despite similarities, the architecture of IBM Cognos Business Intelligence products is much different than the architecture of IBM Cognos Series 7 Web products.

Ensure that you learn about the IBM Cognos BI architecture so that you can plan your network topology.

**Implementation and deployment**

IBM Cognos BI delivers all capabilities through a zero-footprint, browser-based user interface. In contrast to some IBM Cognos Series 7 products, in IBM Cognos BI there is nothing to install or maintain on end users’ desktops. For large organizations, which are often geographically dispersed, this means administration can be distributed, allowing local or regional administrators to handle updates for users and roles.

Note that IBM Cognos PowerPlay client is virtually identical to the IBM Cognos Series 7 version, and is still a Microsoft Windows application.

Because the IBM Cognos BI platform uses peer-to-peer Web services, configuration and deployment is much simpler than in IBM Cognos Series 7. With peer-to-peer services, no service is considered more important than any other, and there is no concept of a master service. Every service has fault tolerance as any request can be handled by any service of that type in the configuration. In addition these IBM Cognos BI services are loosely coupled so no service needs to know how the other services do their job, nor what they are doing at any particular time, or where they reside. The value of having services as the foundation of the architecture is that they provide backup for one another.

**Server topology**

As you move from departmental solutions in IBM Cognos Series 7 to enterprise solutions in IBM Cognos BI, your server topology will change to meet business goals, provide an environment that consists of industry standard technologies, and is secure and recoverable.

In IBM Cognos BI, incoming requests are dispatched to the appropriate service and the distribution of work is based on the defined server capacity, work affinities, and a set of controls that are set by the administrator. For example, the administrator may decide to dedicate certain resources to specific users, allocate query services to run adjacent to the data source, or dedicate servers to production report generation. The IBM Cognos BI platform enables role-based assignments for servers and automatic load balancing.
Integration with existing assets

IT departments are hesitant to invest in new software that requires changing the existing environment. IBM Cognos BI integrates with your existing reporting environment, applications, and processes. It fits within your organization’s infrastructure today, and as IT strategies change, IBM Cognos BI can readily adapt by leveraging the capabilities of existing application servers, portals, operating systems, security assets, and data sources.

Security

Based on an open architecture, IBM Cognos Business Intelligence integrates with enterprise software components to provide end-to-end security. You can choose to continue using IBM Cognos Series 7 security or move to your corporate security infrastructure.

If you choose to move to your corporate security infrastructure, you will not need to use an IBM Cognos Series 7 namespace for security unless you use secured IBM Cognos Series 7 PowerCubes, or set up interoperability between IBM Cognos Series 7 and IBM Cognos BI.

IBM Cognos BI security controls user access to specific data within a common model, and provides an audit for the information that users access. This enables secured access based on capabilities and privileges.

Recommendation - perform capacity planning

Capacity planning involves estimating the space, computer hardware, and connection infrastructure resources that will be needed over some future time period.

Complete a capacity plan to determine whether your environment can handle the load that your organization expects to put on the environment after migrating to IBM Cognos Business Intelligence. It is important to try to evaluate the performance of the new system before migration.

For example, GO Company is in the early stages of their migration project. They want to know whether additional hardware or other resources are required when they move to IBM Cognos BI.

We recommend that before they engage in capacity planning, they should understand the BI requirements of their organization now and in the future. They should also have experience with IBM Cognos products.

They should have sufficient knowledge about the planned BI implementation to determine how much data they will be using, the complexity of their reports, and the number of concurrent users.

To assess the hardware resources needed, they must understand the information access needs. Several factors are important to consider when conducting capacity planning. Each of the following factors influences system performance:

• peak system usage periods
• number of concurrent users the system can support
• number of concurrent users expected
• acceptable response times for the system
Capacity planning is an iterative process that measures the number of requests the server currently processes and how much demand each request places on the server resources. Using this data, you can calculate the computing resources (CPU, RAM, disk space, and network bandwidth) necessary to support current and future usage levels.

We use a scalable model to provide guidelines for capacity estimates. The Capacity Planning Questionnaire is the first step in taking a snapshot of your planned IBM Cognos BI application requirements. For more information, see the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter].

Product versions and supported migration paths

Specific migration and upgrade paths are supported, which may influence what and when you migrate.

For example, for IBM Cognos Impromptu Web Reports, the IBM Cognos 8.3 migration tools support migrating from IBM Cognos Series 7.4 to IBM Cognos 8.3, or for IBM Cognos PowerPlay, the IBM Cognos 8.4 migration tools support moving from IBM Cognos Series 7.4 to IBM Cognos 8.4 PowerPlay.

For information about supported paths, see the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter].

Environments

Supported hardware and software environments for IBM Cognos Series 7 and IBM Cognos Business Intelligence are different.

Migration may provide opportunities for different environments. For example, a company may have a requirement to build applications on different operating systems. In addition to being available on the same operating systems as IBM Cognos Series 7, IBM Cognos BI also runs on additional platforms, such as Linux.

For information about supported hardware and software environments, see the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter].

User experience

In a business organization, the roles and goals of user communities are independent of the products they use to achieve these goals. User communities and their business goals do not change, but the tools they use to achieve their business goals may change.

IBM Cognos Business Intelligence is different from IBM Cognos Series 7 and the user experience for each user community will be different. Some level of retraining, depending on the product, is required to help users learn to do things differently is required for successful user adoption.

When assessing the costs of moving your users to IBM Cognos BI, such as the cost of developing a training plan, for each user community it is important to understand

- the IBM Cognos Series 7 products they use
how they use the IBM Cognos Series 7 products
what capabilities they will use in IBM Cognos BI

Also understand how the current and future needs of your users influence your
migration strategy and how the choice you make impacts users. For example,
maintaining existing applications in IBM Cognos Series 7 provides continuity.
Migrating applications to IBM Cognos BI may cause some disruption, but
introduces business benefits. Building new applications in IBM Cognos BI and
setting up interoperability between IBM Cognos Series 7 and IBM Cognos BI, or
using only IBM Cognos PowerPlay Studio may be useful methods to slowly
transition users.

User experience for consumers

Report consumers commonly use a portal to view reports, analyses, queries, and
scorecards.

Usually consumers are managers, senior managers, or executives who look at
dashboards or summary reports to get a high-level graphical view of company
performance indicators.

In IBM Cognos Business Intelligence, consumers use the IBM Cognos BI portal
with consumer capabilities and Cognos Viewer to view reports. They can also
receive reports by email, schedule a report to run at a specific time, create and
manage portal folders and shortcuts, export reports to other formats, set personal
portal preferences for language, time zones, and appearance. They can also
consume reports embedded in Microsoft Office documents.

User experience for business managers

Business managers use IBM Cognos products to explore information, looking for
trends and exceptions. They look at data qualitatively, using their experience to
assess trends.

Examples of a business manager include middle managers who want to
understand how their product line is performing. They commonly look at revenue
or cost trends over a period of time and explore data on their own, or at the
request of a superior, to get more information when exceptions occur.

Business managers use many of the same IBM Cognos Series 7 products as
consumers in addition to the following:

• IBM Cognos PowerPlay Web Explorer
• PowerPlay for Microsoft Windows
• PowerPlay for Microsoft Excel
• IBM Cognos Impromptu
• IBM Cognos Query

Business managers who use Impromptu and IBM Cognos Query will likely use
IBM Cognos Query Studio in IBM Cognos Business Intelligence to create simple
reports and to accomplish most of their ad hoc query needs. Those who use
PowerPlay for Microsoft Windows and PowerPlay for Microsoft Excel should
consider using both IBM Cognos PowerPlay Client and IBM Cognos Analysis for
Microsoft Excel to meet their needs. Those who use PowerPlay Web Explorer will
likely use IBM Cognos PowerPlay Studio in IBM Cognos BI.
**User experience for analysts**

Business analysts may use pre-defined reports as a starting point to sift through large amounts of data to narrow it down to smaller amounts of data. They investigate different areas of the business to find answers to business questions.

Business analysts usually compare data and test hypotheses by changing variables in a number of scenarios. They usually use some quantitative tools to analyze data.

Usually the business analyst is alerted by a request from another manager or by an email notification to seek an answer to a business question, such as “Who is the top salesperson in each region for a specific product and period?” Commonly, analysts evaluate an item relative to a set of its peers by ranking or doing other types of comparisons.

For example, you can rank a product line, such as golf equipment, to identify how sales for golf equipment for the salesperson compare to sales in other years.

A business analyst uses many of the same IBM Cognos Series 7 products as consumers in addition to the following:
- IBM Cognos PowerPlay Web Explorer
- PowerPlay for Microsoft Windows in reporter mode
- PowerPlay for Microsoft Excel
- Personal Transformer
- IBM Cognos Impromptu
- IBM Cognos Query

Analysts who use PowerPlay Web Explorer may find that IBM Cognos Analysis Studio in IBM Cognos Business Intelligence will meet their business needs for analyzing and comparing dimensional data. Analysis Studio is different than PowerPlay and requires user training.

Analysts who use Impromptu and IBM Cognos Query will likely use IBM Cognos Query Studio in IBM Cognos BI to create simple reports and to meet most of their ad hoc query needs. Analysts who use Impromptu to define queries for Transformer cubes (.iqd files) can continue to use this functionality in Impromptu or may consider leveraging Query Studio or IBM Cognos Report Studio reports to define the queries. Queries which reference IQD data sources in upgraded Transformer models can be changed to point to a query based on an IBM Cognos BI package or report.

Analysts who use PowerPlay for Microsoft Windows and Personal Transformer can upgrade to IBM Cognos PowerPlay and Transformer 8. Analysts who use Personal Transformer and who have added security to the PowerCubes must publish the PowerCube to IBM Cognos Connection and use it there.

Analysts who use PowerPlay for Microsoft Excel will find that IBM Cognos BI Analysis for Microsoft Excel provides comparable functionality.

**User experience for disconnected users**

Disconnected users are those users who for a portion of their time or working day do not have access to the corporate network. Usually these are mobile workers across the organization.
Disconnected users may include sales people who need customer and pipeline details, operations personnel who need supply chain information, and executives who need constant access to business information.

Disconnected users use the following IBM Cognos Series 7 products:

- IBM Cognos PowerPlay for Microsoft Windows to access local cubes or sub-cubes
- PowerPlay for Microsoft Excel to access local cubes or sub-cubes
- IBM Cognos Impromptu snapshots or hotfiles

IBM Cognos Mobile provides a solution for mobile workers who need to access and interact with BI information on PDAs such as BlackBerrys. IBM Cognos Mobile provides disconnected and offline use. Users can continue to access their reports while they are offline, allowing them to continue working while traveling or when the device is not within connectivity range. PowerPlay for Microsoft Windows users who want local access can continue to use PowerPlay for Microsoft Windows in IBM Cognos Business Intelligence. PowerPlay for Microsoft Excel users can continue to use PowerPlay for Microsoft Excel or can use IBM Cognos Analysis for Microsoft Excel.

However, IBM Cognos BI does not provide direct access to cubes, snapshots, or hotfiles because many businesses want to move toward increased collaboration and controlled access to data.

IBM Cognos BI enables organizations to increase collaboration and efficiency by creating a “single version of the truth” strategy. Decision makers from different departments can spend less time debating the accuracy of one another’s numbers and more time solving business issues.

**User experience for report authors**

In most organizations, there are professional report authors and business authors. Professional authors build sophisticated reports for others. They collect report requirements, create the reports, and deploy them.

Professional authors may use simple or complex formatting, filters, and prompts. Business authors use pre-defined reports to understand the status of the business and may build simple, ad hoc queries to focus on variances and exceptions.

Report authors use the following IBM Cognos Series 7 products:

- IBM Cognos Impromptu in client-server mode or to publish to Impromptu Web Reports
- IBM Cognos PowerPlay for Microsoft Windows in client-server mode to publish to PowerPlay Web Viewer
- PowerPlay Web for testing or to look at PowerPlay for Microsoft Windows reports published to PowerPlay Web Viewer
- PowerPlay Web in Explorer mode to create reports using live data
- NoticeCast Administration to set up business events that happen against operational data
- IBM Cognos Query for creating standardized queries (similar to templates)
- IBM Cognos Visualizer to create complex multi-metric visualizations for presentations and reports based on corporate data
Professional report authors who use Impromptu and Impromptu Web Reports to create reports will use IBM Cognos Report Studio in IBM Cognos Business Intelligence to build sophisticated, multiple-page, multiple-query reports against multiple databases.

Users who author reports in PowerPlay for Microsoft Windows in client-server mode may use PowerPlay 8 BI in client-server mode and use Report Studio.

Business authors who use IBM Cognos Query to create simple reports may use IBM Cognos Query Studio, or IBM Cognos Business Insight Advanced.

Authors who use IBM Cognos Query to create report templates that provide formatting, such as color, font, and style will likely use features in Report Studio to accomplish their goals.

Authors who use IBM Cognos Visualizer to create visualizations that show traffic lights or metrics, will likely use IBM Cognos Metric Studio to create scorecards, and Report Studio to create dashboards.

Authors who set up notifications to detect operational events will find that the administration functions in IBM Cognos Connection include email distribution of reports and scheduling. IBM Cognos Event Studio has functionality that allows you to set up operational events detection and management.

**User experience for administrators**

Administrators manage the technical deployment of a company’s applications, review hardware and software requirements, and may plan the overall system infrastructure, including installation, configuration, and system optimization.

In IBM Cognos Series 7, a number of tools are used to administer objects, users, and servers including:

- IBM Cognos PowerPlay Enterprise Server Administration
- Deployment Manager
- Access Manager
- Configuration Manager
- Visualizer Administration
- NoticeCast Administration
- Upfront Administration
- IBM Cognos Impromptu Web Reports Report Administration
- Impromptu Web Reports Server Administration
- IBM Cognos Query Server Administration
- automation methods, such as application and server automation

The need to administer BI on Microsoft Windows desktops across the organization is eliminated in IBM Cognos Business Intelligence. There is a single administration layer for all capabilities. Administration, including deploying content, managing servers, setting up security, and so on, is centralized in IBM Cognos BI. All administration is done in the portal, as shown in the following table.
Table 6. Administration tools and their uses

<table>
<thead>
<tr>
<th>Administration tool</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory tool</td>
<td>Create and manage users, groups and roles, data sources, distribution lists and contacts, and printers.</td>
</tr>
<tr>
<td>PowerPlay tool</td>
<td>Administer cube and report properties for PowerPlay 8.</td>
</tr>
<tr>
<td>Portal administration tool</td>
<td>Manage styles, Cognos portlets, and third-party portlets in IBM Cognos Connection.</td>
</tr>
<tr>
<td>Capabilities tool</td>
<td>Control access to secured functions, such as Administration and IBM Cognos Report Studio features, including bursting, user-defined SQL, and migration.</td>
</tr>
<tr>
<td>Server administration tool</td>
<td>View and manage dispatchers, and services, and tune the performance.</td>
</tr>
<tr>
<td>Content administration tool</td>
<td>Deploy IBM Cognos BI by exporting from a source environment and then importing to a target environment. Perform content store maintenance tasks and migration. Migrate PowerPlay 7 content to IBM Cognos PowerPlay</td>
</tr>
</tbody>
</table>

Almost everything the product can do, can be achieved by using the appropriate API, URL interface, or command line utility. For more information, see the IBM Cognos BI Administration and Security Guide.

User experience for metadata modelers

Metadata modelers create a business view of data sources to help users, including department heads, directors, analysts, knowledge workers, business leaders, and executives, to better understand an organization’s data assets.

In IBM Cognos Series 7, metadata modelers use the following:
- IBM Cognos Impromptu Administrator
- IBM Cognos Transformer
- IBM Cognos Architect

Framework Manager is the modeling tool in IBM Cognos Business Intelligence. Transformer is the modeling tool for designing, building and deploying multidimensional high speed data access caches. You can use PowerCubes from either IBM Cognos Series 7 or Transformer in IBM Cognos BI. You can publish PowerCubes from either Transformer version 8.3 and later, or you can deploy IBM Cognos Series 7 PowerCubes from IBM Cognos Administration.
If you use Impromptu to create Impromptu Query Definitions (.iqd) files for Transformer, you can continue to use this functionality in Impromptu. Using IQDs with Transformer 8.3 can be done, provided the IBM Cognos Series 7 gateway is installed with Transformer on a platform supported by IBM Cognos Series 7.

Another alternative is to change references from the IQD data sources in the model to queries which leverage metadata from IBM Cognos BI reports or packages. Authoring queries in Transformer from IBM Cognos BI reports or packages allows self-sufficiency while taking advantage of the open data access strategy of IBM Cognos BI. Other benefits include support for multi-select statements, local processing, prompts, and in many cases, much faster read performance of the data source.

You can publish PowerCubes in IBM Cognos BI version 8.3 and later from Transformer, IBM Cognos Administration, or Framework Manager. The analyst or Transformer modeler is no longer dependent on Framework Manager for publishing a single PowerCube. The IBM Cognos BI administrator can quickly and easily create a package for IBM Cognos Series 7 PowerCubes when authoring the data sources in IBM Cognos Administration. With the added benefit of publishing packages into MyFolders or another folder, you can now organize PowerCubes in IBM Cognos Connection rather than publishing multiple cubes into a single package.

If you use Architect, you will use Framework Manager. If you are using Impromptu Administrator with star and snowflake schemas, then you will use Framework Manager to dimensionally model relational data sources. If you use Impromptu Administrator with normalized databases, then you will also use Framework Manager with query subjects.

If you use Impromptu Administrator to create catalogs, you will use Framework Manager. You can either create new models in Framework Manager using best practices modeling techniques (see Guidelines for Metadata Modeling), or start by migrating your Impromptu catalogs to Framework Manager using the migration tools. If you use the migration tools, you should still apply Framework Manager's best practices to your migrated model.

**Example - moving PowerPlay users to IBM Cognos BI**

IBM Cognos Series 7 users explore, report, and analyze data derived from OLAP data sources using IBM Cognos PowerPlay. In IBM Cognos Business Intelligence, PowerPlay users will each have different capabilities depending on what they are doing. The tool they use depends on what they are doing.

IBM Cognos BI has new capabilities that can change the way you approach the solution you offer to your business users.

For example, at GO Company, Melissa, Patrick, Patti, and Sylvio each use PowerPlay because some of the reports they need use data from a PowerCube. Patrick views standard PowerPlay reports published to IBM Cognos Upfront. Melissa writes the standard reports in PowerPlay for Microsoft Windows and then publishes them to Upfront. Patti uses PowerPlay Web Explorer to interactively explore PowerPlay reports. Sylvio uses PowerPlay Web Explorer to analyze data in the reports.

Patrick, Melissa, Patti, and Sylvio will use IBM Cognos BI to do their reporting, exploration, analysis, and viewing. The tool or studio they use depends on their
task, not the type of data source the report uses. Patrick will likely have consumer capabilities and use Cognos Viewer and IBM Cognos Connection to view reports and organize his folders. Melissa, who creates standard reports, will probably use IBM Cognos Report Studio. Patti may do some light exploration in PowerPlay Studio. She may also drill up and drill down to view related information. Sylvio will probably do multidimensional analysis and exploration of large data sources in Analysis Studio.

**Expertise assessment**

Assessing and upgrading skills is an important part of the process of moving to IBM Cognos Business Intelligence.

Individuals with IBM Cognos Series 7 experience, such as data modelers and system administrators, will play an important role in the move. These people will be familiar with the IBM Cognos Series 7 application, or parts of the application. If you engage some of these people in the evaluation of IBM Cognos BI, they can help to identify the similarities and differences between IBM Cognos Series 7 and IBM Cognos BI. They will also be able to assess the training requirements for IBM Cognos BI.

Because some of the basic architecture and concepts of IBM Cognos BI are different from IBM Cognos Series 7, additional training will be required for some groups. The most significant differences are in data modeling and system administration. The individuals involved in these areas will require training to ensure the move to IBM Cognos BI is successful. Other groups, such as consumers, or users of IBM Cognos PowerPlay Studio, may not require significant training.

Before you develop a training plan for IBM Cognos BI, answer the following questions:

- **Who will determine training requirements for IBM Cognos BI?**
  
  Will people with IBM Cognos Series 7 experience evaluate IBM Cognos BI to determine training requirements? Will you engage IBM Cognos Software Services or consultants for training recommendations?

- **How many people require training?**
  
  How many data modelers will work with Framework Manager? How many analysts will work with Transformer? How many business intelligence administrators will be involved in the deployment and administration of your IBM Cognos software?

- **How will you deliver IBM Cognos BI training?**
  
  Do you have trainers in your company? Will IBM Cognos Software Services or another contractor deliver the training?

  IBM Cognos Software Services provides a variety of training options including custom user training, e-Learning, and classroom training. Several training aids are included with IBM Cognos BI, such as quick tours, samples, and documentation.

- **What types of training will you require?**
  
  Does your IT department have the required skills to deploy and manage IBM Cognos BI? Do users require training for report authoring?

  The information in the IBM Cognos BI Architecture and Planning Guide and the IBM Cognos PowerPlay Administration and Security Guide will help you to understand IBM Cognos BI and identify training requirements.
Understanding the application lifecycle

One of the factors that will influence your decision to move to IBM Cognos Business Intelligence is which stage you have reached in the application lifecycle.

• **Early stage**
  You have decided to deploy part or all of a performance management solution. You are still in development and testing mode with data modeling and report design. The initial applications are point solutions targeted to a small group of users and you work closely with these users to ensure that the solution meet their needs. You may be using a limited set of the tools you intend to deploy. You add enhancements as you work with stakeholders to design the ideal solution.

  If your application is in the early stage of development you should move to IBM Cognos BI now to fully take advantage of the new functionality in IBM Cognos BI as you build and expand your performance management solution.

• **Growth**
  The initial development and testing is complete and you are confident your BI solution meets the needs of your users. You are increasing the number of users and departments. Some departments are up and running with one or more applications. You are thinking about requirements to expand the solution to include planning and budgeting or scorecarding in the near future. You may have decided to standardize on a performance management solution from a single vendor.

  If your application is in the growth stage, you should move to IBM Cognos BI now. This will allow you to benefit fully from its scalable architecture and prepare for a complete performance management implementation.

• **Mass adoption**
  The application is in place and satisfies the major requirements of the project. Most users understand the benefits and they are familiar with the solution that you deployed. The stakeholders may still be asking for some new minor features, but they are happy with the way the solution works.

  If your application is at the mass adoption stage, you should continue to work with IBM Cognos Series 7. If IBM Cognos Series 7 is satisfying your requirements and users, there is no reason to change what you are doing. You have a solution in place and it is working. In future, should you want to benefit from IBM Cognos BI features and functionality, you could consider moving your application then. When you decide to expand your business intelligence solution, or build a new application, we recommend you do so in IBM Cognos BI. You can also take advantage of interoperability between IBM Cognos Series 7 and IBM Cognos BI. You can use new features in IBM Cognos BI while leveraging the value of your IBM Cognos Series 7 applications.

• **Maturity**
  You have had an application in place for a long time. The size of the user base is stable and you are not expecting a significant increase in the number of users in the near future. The end users are familiar with the solution and agree that it meets their needs. There are few requests for additional major features or changes to functionality.

  If your application is at the mature stage, and you do not expect any significant change in your business requirements, you should continue to work with IBM Cognos Series 7. You can move to IBM Cognos BI in stages to support specific user groups, or when you have a significant change in your business requirements that requires the redevelopment of your application. In the future, should you want to benefit from IBM Cognos BI features and functionality, you
can consider moving your application then. When you decide to expand your business intelligence solution, or build a new application, we recommend that you do so in IBM Cognos BI.

**Complexity of the applications**

If your applications are only IBM Cognos PowerPlay, and you only want to migrate them to PowerPlay, then you do not need to assess the complexity of the application. PowerPlay applications can be migrated to IBM Cognos PowerPlay no matter how complex they are.

For mixed applications, the complexity of the application determines how much work may be required to migrate the content to IBM Cognos Business Intelligence and how much time is required to complete the migration.

If you are migrating an application that is not purely PowerPlay, you should establish assessment criteria to help you identify the complexity of the reports and models. For information about how to migrate other metadata and applications from IBM Cognos Series 7 to IBM Cognos BI, see the IBM Cognos BI Migration Assistant User Guide.

Identify the number of reports that use advanced features, such as drill-through to other applications, or complex formatting. For some types of reports, a relatively small amount of work is required to migrate the reports. For more complex reports, you may want to recreate the content from scratch, or make significant changes to migrated content, to take advantage of new features and functionality in IBM Cognos BI. Generally, the higher the complexity of your application, the more time required to migrate.

**Inventory of existing BI Applications**

Preparing for migration from IBM Cognos Series 7 to IBM Cognos Business Intelligence provides an opportunity to review your current BI investment. Inventory your BI applications to understand the strengths, weaknesses, and opportunities for improvement in your current reporting environment.

You likely will not want to migrate IBM Cognos Series 7 content that is rarely or never used. You can use the auditing tools included with IBM Cognos Series 7 to identify how often content is used. You need a reasonable time period of audit data to get a good understanding of usage patterns. The audits provide an objective view of the applications. Assessing and reducing the number of reports is a useful exercise even if you decide not to migrate. Do not rely only on user feedback to determine which content is used.

**Recommendation - use the IBM Cognos usage statistics and inventory template**

Statistics about usage, business priority, and the amount of work required to enhance reports after migration provides important information for planning your migration.

For example, GO Company is in the beginning stages of their migration project. They want to inventory their existing IBM Cognos Series 7 applications to identify which applications have functionality that is required in the new environment,
which are candidates for automated migration using the migration tools, which are candidates for lift and shift or compress and optimize, and which are candidates for interoperability.

We recommend that they inventory existing IBM Cognos Series 7 applications using the Usage_statistics_and_inventory_Template.xls file available from the IBM Cognos Business Intelligence Migration Roadmap at the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter](http://www.ibm.com/software/data/cognos/customercenter).

At the end of the inventory, they should have usage statistics for each product or object that is going to migrate to IBM Cognos BI and an inventory spreadsheet. GO Company should also have a good understanding of the architecture and reporting environment.

### Comparing applications in IBM Cognos Series 7 and IBM Cognos BI

The capabilities of existing IBM Cognos Series 7 applications and the capabilities available in IBM Cognos Business Intelligence influence your migration strategy for an application. Understanding the features and functionality, metadata assets, integration with other products, automation, and scripting in both IBM Cognos Series 7 and IBM Cognos BI, helps to assess how the differences affect usability, manageability, cost, and ultimately the success of your migration.

Whether a required feature is available will influence your path to IBM Cognos BI.

Learn about the new features so that you can design reports that are optimized for IBM Cognos BI. For example, you can migrate an IBM Cognos Impromptu model to IBM Cognos Framework Manager and it will work, but it will not leverage the best practices for modeling in Framework Manager.

### Determine what to migrate

Work with data modelers, report authors, and report consumers to identify content and applications to migrate. If auditing is enabled for IBM Cognos Series 7 products, you can determine content use patterns. Do not migrate content unless you identified a need for the content to be available in IBM Cognos BI. Do not migrate content that will be a duplicate of content already available in the IBM Cognos BI environment. In some cases you can reduce the number of reports by using IBM Cognos BI functionality such as bursting, prompts, and support for multiple languages.

Look at the features and functionality in your legacy applications and do the following:

- List the critical features in IBM Cognos Series 7 applications.
- Find out if these features are available in IBM Cognos BI.
  
  For example, almost all features of IBM Cognos PowerPlay are available in IBM Cognos BI.
- Determine whether the migration tools map the feature to IBM Cognos BI, or if you have to recreate the feature after migration. If direct mapping in IBM Cognos BI does not exist, determine if you can achieve similar results in a different way in IBM Cognos BI. For more information, see the Migration Assistant User Guide.
- List the essential IBM Cognos BI features that were unavailable in IBM Cognos Series 7.
• Decide if you can add these features as enhancements to a migrated report, or if you should create new reports that use the features.

**Types of data sources**

You should do an assessment of the data sources that your current applications use. This is to ensure that they are suitable for IBM Cognos Business Intelligence. It also provides an opportunity to reevaluate your data strategy.

IBM Cognos BI separates your data strategy from the user experience. In IBM Cognos Series 7, you use IBM Cognos Impromptu or Impromptu Web Reports to create reports from data stored in relational databases. You use IBM Cognos PowerPlay Client for Microsoft Windows or PowerPlay Web Reports for data stored in multidimensional (OLAP) data sources.

IBM Cognos BI provides open data access by using enterprise information integration (EII) and extract, transform, and load (ETL) software to supplement direct access.

Data integration enables businesses to bring together information from multiple disparate systems, such as ERPs, mainframes, RDBMS, and flat files for reporting purposes.

IBM Cognos BI can access many kinds of data. How the data is modeled determines which studios will be available to you. There are three types of data sources:

• relational
• multidimensional (OLAP)
• dimensionally modeled relational

Each studio can use the different data sources, as shown in the following table:

**Table 7. Data sources supported by IBM Cognos BI studios**

<table>
<thead>
<tr>
<th>Studio</th>
<th>Relational</th>
<th>Dimensionally Modeled Relational</th>
<th>Multidimensional</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Cognos Report Studio (advanced and managed reporting)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>IBM Cognos Query Studio (adhoc and light reporting)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>IBM Cognos Analysis Studio (data and comparative analysis)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>IBM Cognos PowerPlay Studio (exploration and light analysis)</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>

**Enterprise Information Integration (EII)**

Composite software provides heterogeneous query access by retrieving data from different data sources using a single connection. Composite Information Server
provides access to additional data sources such as LDAP, JDBC, Open XML, and WSDL, and improves performance when querying data that spans data sources.

**Dimensionally Modeled Relational**

If you want to model relational data sources dimensionally, you can first use the migration tools to migrate your reports, then modify your model to add dimensional information.

**Third party OLAP**

If you use OLAP data sources other than PowerCubes in IBM Cognos PowerPlay, then you can either stay in IBM Cognos Series 7, or migrate reports to Report Studio or Analysis Studio.

**Integration with other products**

When you plan your migration strategy, you should be aware of the integration between IBM Cognos Series 7 products, other IBM Cognos products, and external applications and how it affects your migration strategy. In IBM Cognos Series 7, there is a different application programming interface (API) for each product, and each API is a Web Services wrapper.

In IBM Cognos Business Intelligence, there is one API, which is documented in the *Software Development Kit Developer Guide*.

**Integration with IBM Cognos products**

If you require extensive integration with other IBM Cognos products, you should know that interoperability between IBM Cognos BI and other IBM Cognos products based on the same architecture, is usually seamless because of the IBM Cognos BI open architecture.

If you created notifications using NoticeCast, you will use IBM Cognos Event Studio to capture and manage events, send messages, update relational databases, and send messages to Web services. You cannot monitor application events without using the IBM Cognos BI Software Development Kit.

**Integration with external applications**

Generally, any integration between IBM Cognos Series 7 applications and third party products will require redevelopment if you want the same integration in IBM Cognos BI. For example, some of the functionality in IBM Cognos Web Services, such as the ability to pass context between IBM Cognos PowerPlay and an external application, is done by passing context from or to IBM Cognos BI using Cognos Viewer.

Integration with other products may be built into IBM Cognos BI, or may require the IBM Cognos BI Software Development Kit. For example, IBM Cognos BI uses IBM Cognos Portal Services to support third party portals. The portals and version that are supported are different than the ones supported by IBM Cognos Series 7. For information about supported environments, see the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter](http://www.ibm.com/software/data/cognos/customercenter).

If you use Web services for integration, some functionality may be built into IBM Cognos BI, or you may require the IBM Cognos BI Software Development Kit. If
you pass context between PowerPlay and an external application, you can pass context from IBM Cognos BI, or to IBM Cognos BI in Cognos Viewer.

If you use IBM Cognos Portal Services in IBM Cognos Series 7, you should know that IBM Cognos BI supports different portals.

If you embed OLE objects from IBM Cognos Series 7 into other applications, you can either use Microsoft Office within IBM Cognos BI using iFrames, or you can use IBM Cognos BI within Microsoft Office using IBM Cognos BI for Microsoft Office.

**Report content**

Before using the migration tools, it is important to evaluate your report content because there is not necessarily a one-to-one functional mapping between IBM Cognos Series 7 and IBM Cognos Business Intelligence.

IBM Cognos Series 7 PowerPlay reports migrated to IBM Cognos PowerPlay will migrate virtually perfectly because there is a one-to-one mapping between the two products. Results from migration of IBM Cognos Impromptu reports, or of PowerPlay reports to other IBM Cognos BI studios will depend on the report content. Generally, the more complex your report, in terms of data and formatting, the less likely it is that the migration tools will be able to replicate the exact functionality in IBM Cognos BI.

**Features**

By comparing and listing important capabilities, and determining whether the migration tool can migrate those capabilities, you can identify which IBM Cognos Series 7 reports are good candidates for migration. You should migrate content using the migration tools if most capabilities map from IBM Cognos Series 7 to IBM Cognos BI, if the migration tools preserve all or most of the features, and if you find it easier to enhance the migrated report with IBM Cognos BI capabilities than to recreate the report.

Not all features may map well to IBM Cognos BI. Very complex reports, or reports using undocumented techniques, such as non-numeric values in the cells of crosstab reports, may be good candidates for a compress and optimize strategy, or interoperating.

You can replicate most PowerPrompts functionality using IBM Cognos Report Studio functionality. Very complex PowerPrompts features may require IBM Cognos BI Software Development Kit.

**Formatting**

Formatting may not be identical after migration. Migration tools migrate formatting when possible, but formatting can be different between IBM Cognos Series 7 and IBM Cognos BI because default settings, such as fonts and colors are different. If settings are not specified in the original report, the migrated report will look different because the IBM Cognos BI default settings are different from those in IBM Cognos Series 7.
Report types

The way you create some report types, such as dashboard reports and control-limit charts typically used in six sigma reports, is different in IBM Cognos BI than in IBM Cognos Series 7.

Dashboards created in Visualizer are candidates for using compress and optimize because the migration tools do not migrate them. Create dashboards in IBM Cognos BI using Report Studio or IBM Cognos Metric Studio.

Not all six sigma specific control-limit charts are available. In situations where this functionality is important, you may want to consider interoperating.

Drill through

The migration tools can preserve drill-through between IBM Cognos Impromptu or Impromptu Web Reports.

Where IBM Cognos Series 7 PowerPlay applications have been migrated to IBM Cognos PowerPlay and those applications contain drill through to IBM Cognos Series 7 PowerPlay, Impromptu Web Reports, or IBM Cognos Business Intelligence reports, the drill server settings will be migrated. The drill through will continue to work provided the server target information in PowerPlay administration is correct. When attempting to drill through for the first time, the migrated user will see the IBM Cognos Series 7 targets now available on the IBM Cognos BI Related Links page along with other IBM Cognos BI target reports.

IBM Cognos Series 7 drill through options include the following:
- cube to cube
- cube to relational
- report to report (query links)

IBM Cognos BI allows the same drill through paths but has two styles of drill-through: packaged-based and author-based.

Packaged-based drill through allows users to drill between any report or analysis from one package to reports or analyses in another package, even if one is based on an OLAP source and the other is based on relational data. These drill through definitions are authored in IBM Cognos Connection and work across studios.

Author-based drill through definitions are defined in the source report in IBM Cognos Report Studio. This kind of drill through allows users to drill from that source report to defined reports or analyses and can be used for more advanced or unique situations.

IBM Cognos BI drill-through is different than in IBM Cognos Series 7. IBM Cognos Series 7 provided a dynamic drill through experience that may have been unpredictable, depending on the uniqueness of the data. Any changes needed often required remodeling, cube rebuilding, and deployment steps to promote those changes to the users. IBM Cognos BI allows the consumer, analyst, or professional report author to set up drill-through without dependence on the administrator.

IBM Cognos BI drill through provides a dynamic drill through experience similar to IBM Cognos Series 7 drill through. IBM Cognos BI also provides a more controlled method for cases where the experience may have been unpredictable because of the uniqueness of the data, and where the administrator would have
needed to remodel, rebuild or redeploy your packages or cubes in IBM Cognos Series 7. It should be noted that because variances exist in the implementation of specific drill through functionality, it is important to be familiar with IBM Cognos BI before you migrate.

Customizations

Transferring existing IBM Cognos Series 7 customizations to IBM Cognos Business Intelligence requires time, resources, and effort. Some manual work will be involved in migrating customizations.

For example, custom toolbars in IBM Cognos Series 7 will not migrate to IBM Cognos BI studios. However, you can customize the toolbars in some studios in IBM Cognos BI. IBM Cognos Upfront themes are also not migrated. IBM Cognos BI skins, which are similar to Upfront themes, will change the look but not the behavior of applications. Other unsupported user interface customizations and product modifications will not automatically migrate to IBM Cognos BI.

Automation

Any automation or scripting that you have in IBM Cognos Series 7 must be recreated in IBM Cognos Business Intelligence.

Highly automated applications will require time and effort to migrate to IBM Cognos BI. All IBM Cognos BI functionality can be automated using the IBM Cognos BI Software Development Kit.

Examples of automation that must be recreated in IBM Cognos BI include:
- server operations, such as starting and stopping services, cube swap, and backing up and restoring
- report creation and manipulation
- namespace updates
- publishing
- deployment

Virtually everything you can do with the product, you can achieve using the appropriate API, URL interface, or command line utility. For more information, see the IBM Cognos BI Administration and Security Guide.

IBM Cognos Transformer continues to allow automation of cube builds through the command line interface on either Microsoft Windows or UNIX. Modeling automation can be done using the MDL (model definition language) and is the recommended method of scripting model changes. OLE or SDK for modeling is not included in IBM Cognos Transformer.

Challenges when migrating applications

At some time, all organizations face the task of migrating from legacy systems to new systems. These migration efforts are often complex and require an infrastructure plan, a migration plan, and a training plan.

These plans cover issues such as transition support, user interface compatibility, database compatibility, system interface compatibility and so on. These plans should weigh technical considerations against business priorities.
For most IT departments, a migration to a different application platform is one of the most common IT projects. Addressing the business challenges of migrating applications requires careful planning. Specific challenges include the following:

- **Minimize disruption of mission critical applications.**
  The potential impact on employees cannot be underestimated. Users must be able to conduct essential business processes during and after the migration. The new system must not only support all the existing processes and systems, but must meet user expectations for enhanced applications. The migration must be as painless as possible for employees or else the IT staff may find themselves inundated with emails and phone calls from disgruntled employees asking for support.

- **Determine when to migrate.**
  When migrating from IBM Cognos Series 7 to IBM Cognos Business Intelligence, it is essential to choose the optimal time to make the transition. There are a number of potentially opposing factors that may impact this decision. For example, an enterprise with an immediate need to increase capacity may be hesitant to invest in legacy technology and will want to migrate as soon as possible. On the other hand, there may not be adequate existing IT resources to support the migration. Factors such as these must be understood and weighed to determine the proper migration strategy.

- **Users are resistant to change.**
  Try to give user communities who will be using the new applications a sense of ownership by involving them in its development. For example, provide information about the project in advance, and request input during the planning process. Give regular progress reports, and make sure users receive adequate training and support on the new technologies.

- **Applications do not function correctly after migration.**
  Ensure skilled resources are available to perform migration work, especially for mission-critical applications. Also, test and debug all applications prior to deployment.

- **Migration project is not completed on schedule.**
  During the planning process, be generous with estimates of time necessary for the expected work, and then allocate backup resources in the event that a task takes longer than anticipated.

Migration is not linear, but iterative. A linear approach to migration can be short-sighted and costly when there are alternatives. You should take the opportunity to train user communities in IBM Cognos BI so that they gain experience using the new platform. This enables the IT and project teams to continue to work on the complex back-end application migration. In addition, you can develop strategies for retiring legacy applications.
Chapter 6. The migration process

The migration of IBM Cognos Series 7 applications to IBM Cognos Business Intelligence can vary significantly in size and scope. Every organization discovers differences in the impact a migration has on the application and its business processes, on the user communities, and on the support structures.

Despite the many differences among migrations, the migration process is the same.

Your decision regarding the migration of your applications depends on whether the current application meets your business and user community needs. Application requirements change over time and it is not unusual for older applications to no longer meet business needs.
A migration project is similar to an upgrade project. Commonly, you upgrade a sample set of reports in an isolated or sandbox environment, and you compare the appearance and behavior of the reports before and after the upgrade. You should also do this when you migrate.

A migration project differs from an upgrade project. Upgrade is about replacing software. Applications usually work in the new environment, with little or no intervention. Migration is about replicating an application in the new product, either by using tools or redesigning, or a combination of both. Migration projects can be more complex and time consuming or quite quick. For example, migrating a PowerPlay Web application to IBM Cognos PowerPlay is usually very quick.

It is not necessary to move all existing IBM Cognos Series 7 applications to IBM Cognos BI. There are other options available, such as using interoperability or maintaining the existing applications in IBM Cognos Series 7. For example, if you have IBM Cognos Query applications and your user communities are familiar with the applications, you can interoperate.

**Procedure**

1. Understand the business reasons to migrate.
   - Reasons to migrate may be driven by IT initiatives to lower the cost of deployment, or by business reasons such as acquisitions.

2. Understand your migration options.
   - Before you start a migration, gather information about alternative migration paths so that you minimize any loss in functionality or productivity. Recognize the pros and cons of each migration option so that you make the best choice for each application.

3. Get to know IBM Cognos BI.
   - Before you migrate, users from each user community should get to know IBM Cognos BI to understand the new features. They should learn how IBM Cognos BI is different from IBM Cognos Series 7. Applications should be designed so they are optimized for IBM Cognos BI.

4. Analyze your BI environment, including your business objectives and goals, applications, and user communities needs.
   - Look at your existing applications to determine if you want to move all of them to IBM Cognos BI. In many cases you will find that your existing applications are not heavily used and should not move, or that some reports can be eliminated or consolidated.

5. Conduct a technical readiness assessment.
   - Evaluate the technical environment, business goals and corporate culture to identify the current capabilities available. The best strategy is to fix any risks and deficiencies before the solution is implemented.

6. Plan the new environment.
   - Plan the new architecture, including the configuration of hardware and software components.

7. Install and configure IBM Cognos BI components.
   - Design, build and configure security in a development environment.

8. Implement the migration plan.
   - Set up a dual environment so that you have access to both the IBM Cognos Series 7 and IBM Cognos BI environments. Select a sample set of applications to migrate. Determine which migration approach you will use. Design and
build the applications. Migrate by conversion or redesign and test, or set up interoperability. Test to ensure that the application works.

9. Use the new applications.

Put the solution in the hands of users and prepare the application for continuing operation. Establish and define support systems and processes.

Develop training for users. Don’t assume that because users know how to use IBM Cognos Series 7 products they do not require IBM Cognos BI training.

**Results**

After a successful migration, you should have a working application that provides the same functionality as before, or a better application that takes advantage of new features and functionality. You should have an IBM Cognos BI application that delivers the information and decision-making capabilities that you need.

**Related concepts:**

“Recommendation - step 4: set up interoperability between IBM Cognos Series 7 and IBM Cognos BI” on page 34

Set up interoperability before and during migration to provide continuity to your user communities and your business processes, exchange and reuse information, and extend the value of your existing IBM Cognos Series 7 applications.

“Reasons for migrating” on page 25

Companies migrate applications for business reasons, such as to implement new functionality, consolidate existing and acquired applications after a merger or acquisition, or outsource to a service provider. They may also migrate applications to meet the needs of IT.

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**A migration project**

Making any changes to a business-critical enterprise system requires effective and detailed planning. Migration is not just about how to use the migration tools.

Migration is a process that requires careful planning, time, resources, a repeatable methodology, and technology. Since migration involves many activities, including study, planning, preparation, conversion, testing, and implementation, a migration project is usually time-consuming and complicated. You manage migration projects as you would any other major IT project.

A successful migration project involves three key components: the right people, a repeatable process, and reliable technology.

**People**

Assembling the right people for a migration project is important. Input from your BI architect, metadata modelers, trainers, and from user communities is essential so that all aspects of a migration are defined and understood. Some of the team members should have migration project expertise, as well as knowledge of both IBM Cognos Series 7 products and IBM Cognos Business Intelligence. You can also engage IBM Cognos Migration Services to help you, if you do not have this expertise within your organization. For more information, see the Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter).

**Process**

Using a proven, consistent, methodology, such as Cognos Solutions Implementation Methodology, that incorporates planning, technology
implementation, and validation, increases your chance for success. Following a methodology improves efficiency and repeatability and enables you to gather and leverage proven practices from real projects.

**Technology**

Technology, such as migration tools, helps to accelerate development and acceptance. Other tools offered by IBM Cognos partners, such as auditing and metadata tools can help make your migration easier and more successful.

As part of planning your migration, you can consult the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter](http://www.ibm.com/software/data/cognos/customercenter) for more information, migration tools, and assistance.

**Recommendation - do not assume you should replicate everything**

It is common to assume that you should replicate the source applications in the new environment. However, that can be both costly and unnecessary.

Depending on the application, you may even fail to take advantage of the new features and functionality of IBM Cognos Business Intelligence. For example, the migration project team for the sales department in central Europe is developing a migration plan. Part of the plan is communicating to their business users about the project and setting reasonable expectations. They are taking advantage of dashboarding and support for mobile users in IBM Cognos BI.

When an application is replicated in a new environment, the best outcome is the same application, which may be what you want. If there is a significant difference between environments and the project team redesigns or reworks parts of the application to take advantage of the features and functionality in IBM Cognos BI, the best outcome is a better application.

We recommend that the project team learns IBM Cognos BI before they migrate. This allows them to determine which applications they should migrate using the migration tools, and which applications require some rework before or after migration.

**Migration methodology**

Following a proven methodology allows you to obtain guidance and consistency throughout a project and reduces costs while increasing productivity and quality.

Use a methodology as a template to ensure that you have a repeatable process that you can follow for all of your migration projects.

**Recommendation - Cognos Solutions Implementation Methodology (CSIM)**

We developed the CSIM to ensure successful implementations. The methodology minimizes risk by using proven practices and evolving knowledge gathered from real projects at many customer sites.

The methodology is delivered through a collaborative software tool and is available to customers and partners for download at the Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter](http://www.ibm.com/software/data/cognos/customercenter).
For example, as a result of several mergers and acquisitions, GO Company uses multiple platforms and incompatible technologies. The finance department has data, applications, and user communities spread across many geographic locations. GO Company plans to migrate applications developed and managed in disparate geographic locations by trying to establish and follow a repeatable migration process. From both a business and IT perspective, GO Company knows that when you follow a methodology, you benefit from reduced costs in operations, management, and training.

We recommend that the finance department at corporate headquarters engage consultants, such as IBM Cognos Software Services, to help them with their migration project. The migration team can use the CSIM toolkit, which is an application that organizes material for a project into five phases.

Each phase is overseen by a project management function that ensures consistent and coordinated communication and collaboration. The first phase involves an assessment of the project scope and evaluates the technical readiness of the department to migrate. The assessment is key to a successful migration project. We work with the finance department to understand the customer requirements.

The next three phases: design, build and deploy, are treated as one iterative process where a small set of representative reports are migrated at one time.

In the operate phase, people in the finance departments are using the migrated applications in their daily activities. At the same time, the migration project team focuses on modifications related to maintenance checkpoints, backup and data restoration, and ongoing monitoring and performance management.

Because of the methodology and the guidance of IBM Cognos Software Services, the finance department uses a standard set of tools. This ensures a consistent approach and a repeatable process, which can be used for future projects.

### Analyze phase

The first phase of a migration project involves the BI architect, modeler, trainer, project management team, and project manager. Together they define what the solution needs to accomplish. They examine the features and non-functional attributes that the applications must deliver.

Understand your current BI infrastructure and environment so that you can accurately evaluate your migration options. The results of this assessment help to define the migration scope.

Work with the subject matter experts in your organization to identify the IBM Cognos Series 7 functionality you consider critical to your current and future IBM Cognos applications. Consider whether you want to reuse both metadata and reports and whether you will you use the migration tools or redevelop parts of the application in IBM Cognos Business Intelligence, or both.

Establish a timeline to complete the move. Try to include all the recommended phases of the application deployment: development, testing, quality control, and production implementation. Ensure that you have sufficient resources to complete the move and determine whether you should consider outsourcing the migration to implementation experts, such as IBM Cognos Software Services or experienced partners.
Consider both technical and cultural factors, such as whether you have the IT infrastructure to support IBM Cognos BI and whether your users are receptive to change. Document any issues that you discover. You can incorporate them in the design of the migration plans and schedules.

**Recommendation - migration assessment is key to successful deployments**

Using experience and a proven methodology, IBM Cognos Migration Services delivers an onsite migration assessment for your organization. The assessment focuses on the Analyses phase of Cognos Solutions Implementation Methodology (CSIM). IBM Cognos Migration Services helps you move your existing reports and business rules forward.

For example, the sales department at GO Company plans to move to IBM Cognos Business Intelligence. The migration project team wants to use their existing sales applications in IBM Cognos BI, but are unsure of the effort, timelines, or infrastructure they require. The company needs help to get started on their migration plans.

We recommend that the company engage IBM Cognos consultants or other experienced partners for a migration assessment. The assessment provides a comprehensive analysis which
- defines the migration objectives
- outlines the scope of the project
- evaluates the migration options
- assesses performance
- assesses hardware and software configurations
- addresses capacity planning
- identifies resource requirements

The outcome of an assessment is a thorough analysis and understanding of the application migration requirements and limitations, a migration implementation proposal, or a prototype of the migration project. For information about the Assessment Service, see the Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter).

**Recommendation - take an inventory of your existing applications to reduce the number of reports to migrate**

Examine your existing IBM Cognos Series 7 applications to see which applications are candidates for migration. You may find that you will not want to move all content to IBM Cognos Business Intelligence.

For example, the GO Company sales department plans to move to IBM Cognos BI. The sales department wants to use existing sales applications in IBM Cognos BI. However, the department has over 100 applications and the migration project team does not have the time or resources to move all of them at one time.

We recommend that the migration team work with the sales team to conduct an audit of the sales applications to determine which applications should be migrated. It is not uncommon to find that a number of applications are not used or no longer meet the company’s requirements.
The migration team should do the following:

- **Audit usage.**
  The migration project team should interview the sales team members to see which cubes, views, or reports are needed and used, which ones they can consolidate, and which ones they can eliminate. They should migrate only the reports that users need and use. This reduces the number of applications that they migrate.

- **Prioritize the reports.**
  The project team should look at the purpose of each report and assign a priority. This identifies business-critical applications and the functionality that is required in the new environment.

- **Assess the application migration strategy.**
  For each application, the project team should look at the complexity of each report, which is determined by things such as the presence of outerjoins, prompts, hotfiles, and the use of third party products for the data sources. This helps identify whether the migration tools, a combination of compress and optimize and lift and shift, or interoperability is needed.

At the end of the audit, the team should have groups of candidate migration reports that fall into one of the following categories:

- **Do not migrate**
  These reports are working well in IBM Cognos Series 7 or can also be shared with IBM Cognos BI using interoperability options.

- **Eliminate**
  The report is no longer used.

- **Migrate using migration tools**
  Good candidates include IBM Cognos PowerPlay applications.

- **Migrate using compress and optimize**
  Replace multiple IBM Cognos Series 7 reports with a single or fewer IBM Cognos BI reports, or replace IBM Cognos Series 7 reports with new capabilities in new IBM Cognos BI reports.

- **Use a combination of migration approaches, using tools and the compress and optimize strategy**

### Implementation of the migration plan - design, build, and deploy

Implementing the migration plan involves designing, building, and deploying the migrated application. These three tasks together form an iterative process that is repeated for each sample set of reports that is migrated.

Install a development environment where you design, build, and test an application. Testing a migrated application in IBM Cognos Business Intelligence is different than testing an application that you designed for IBM Cognos Series 7. When you move an application, you may not understand its functionality as well as you would if you designed the application to run in IBM Cognos BI.

An appropriate level of support and maintenance is key to the success of your migration project. Your support staff and systems must be ready for the new environment. Plan to migrate the appropriate support tools and monitoring systems and retrain your support staff.
Some user training is required after migration. You should assess the training needs of individual user communities before you implement the live environment, so that you can plan user training appropriately.

**Recommendation - run a pilot migration**

Pilot migration projects are valuable and practical exercises because they ensure that the selected migration options produce the required outcome.

In addition, an evaluation of the pilot migration ensures that the migration is successful if performed as expected. You may see whether you need to consider a combination of migration options.

For example, the marketing department in GO Company has completed most of the analysis and assessment phase of the migration project. They want to validate some of their assumptions to see if their project plan produces the expected results.

We recommend that they run a pilot migration. A pilot migration involves the following tasks:

- **Set up a test environment**
  The project team should test the proposed migration strategy in an environment that simulates and protects their production environment.

- **Migrate**
  Whether the project team chooses to do a lift and shift or a compress and optimize, they should become familiar with how to use the migration tools by testing them on some reports. Sometimes, this provides a head start on projects where applications are targeted to be redesigned. Migration tools help to migrate applications but don’t necessarily move all content. Some steps may be manual and thorough testing is required.

- **Improve**
  The project team should ensure that the application uses the new features available in IBM Cognos Business Intelligence. They can also do some rework to improve the application performance or functionality.

- **Test**
  The project team should test the application to ensure that it works in IBM Cognos BI.

**Related concepts:**

- “What to expect when you move content from IBM Cognos Series 7 to IBM Cognos BI” on page 37
- “Hybrid migration approach - interoperate as you migrate or enhance as you convert” on page 47

Because of differences in product architecture and functionality, it is not always possible to simply reuse IBM Cognos Series 7 metadata or applications in IBM Cognos Business Intelligence.

Operating phase - move to production environment

Gradually introduce migrated applications to users who have received training. Establish maintenance checkpoints, perform periodic cleanup, and do some performance tuning.
During this phase, the ownership of the migrated application is transferred from the migration team to regular operations. The applications become part of the operations infrastructure and are managed and maintained using common business processes that operate other parts of the IT environment.
Appendix. Quick reference to concepts used in this guide

Use these brief descriptions to help you understand concepts and terminology used in this guide. More comprehensive information about these concepts is available in the guide.

Administrators

Administrators manage and make changes to software that affects other users.

Administrators change security settings, install software, and access all files on the computer. Administrators can also make changes to other user accounts. Administrators are expert users, usually belonging to the IT department in an organization.

Analysis

Analysis is a process involving a range of techniques dealing with the collection, classification, and interpretation of data to gain insight and reveal patterns, anomalies, key variables and relationships.

It is a process where a user interacts with data to gain insight and understanding to get the “why” behind an event or an action, or to improve business performance. You analyze the factors driving your business by organizing data into logical categories, such as fiscal periods, sales regions, or product groups. You move from summary level to transactional level detail to find the information you are looking for.

In IBM Cognos Business Intelligence, IBM Cognos Analysis Studio is designed to facilitate analysis by allowing users to monitor and compare data from multiple sources. Users can analyze and report against online analytical processing (OLAP) and dimensionally aware relational sources.

Business analysts

Business analysts develop models to analyze the business needs of their organization.

Analysts help to identify business problems and propose solutions. They understand how data flows though the organization and know how to translate that knowledge.

Business managers

Business managers use IBM Cognos products to explore information, looking for trends and exceptions.

Examples of business managers include middle or senior managers who want to understand how their product line is performing. They commonly look at revenue or cost trends over a period of time and explore data on their own, or at the request of a superior, to get more information when exceptions occur.
Cognos Solutions Implementation Methodology (CSIM)

The Cognos Solutions Implementation Methodology (CSIM) is designed to ensure successful and repeatable IBM Cognos deployments. It is a step-by-step approach used by IBM Cognos consultants, partners, and customers to successfully implement IBM Cognos solutions.

CSIM follows five project management phases: analyze, design, build, deploy, and operate.

Compress and optimize

Compress and optimize is a strategy for a migration to an IBM Cognos Business Intelligence application that is better suited to take advantage of IBM Cognos BI features and functionality.

It identifies specific areas where IBM Cognos BI can enhance or consolidate existing IBM Cognos Series 7 assets.

Consumers

Consumers form a large part of the population that uses IBM Cognos software to do their jobs.

Consumers require easy access to reports and usually view reports published to a portal. They may receive reports by email, based on a condition or an alert.

Dimensionally Modeled Relational data sources

Dimensional modeling of relational data sources is a capability that is available in IBM Cognos Business Intelligence. You can model dimensions with hierarchies and levels, and model facts with multiple measures.

You must dimensionally model a relational data source when you want to do one or more of the following:
• use IBM Cognos Analysis Studio with the data sources
• enable drill functionality in reports
• access member functions in the report authoring tools

Disconnected users

Disconnected users do not have access to the corporate network.

Usually these are mobile workers across the organization, including sales people who need customer and pipeline details, operations personnel who need supply chain information, and executives who must have constant access to critical business information.

Exploration

Data exploration allows users to search, browse, and navigate through unfamiliar data and areas of business. Exploration techniques include slice and dice, drill through, rank, and sort.
In IBM Cognos Business Intelligence, IBM Cognos PowerPlay Studio is designed to facilitate exploration.

**Hybrid migrations**

You can choose to use a combination of tools and manual processes when you migrate an application or report. In some situations, you may discover opportunities to improve an existing application during or after migration.

Two common hybrid migration approaches are
- interoperate as you migrate
- enhance as you convert

**Interoperability**

Interoperability is the ability of different software products to share data.

Interoperability is enabled when you have two products, such as IBM Cognos Series 7 and IBM Cognos Business Intelligence running in parallel and you share data between them.

There are different types and levels of interoperability between IBM Cognos BI and IBM Cognos Series 7, including the following:
- a single portal for IBM Cognos Series 7 and IBM Cognos BI
- report on cubes in IBM Cognos BI
- IBM Cognos Series 7 security in IBM Cognos BI for single signon

**Lift and shift**

Lift and shift is a migration strategy in which you use migration tools to automatically move BI elements from IBM Cognos Series 7 to IBM Cognos Business Intelligence.

This approach is used to try to replicate existing functionality from an IBM Cognos Series 7 application to an IBM Cognos BI application.

**Metadata modelers**

Modelers prepare views of data sources, including transactional and multidimensional, based on the reporting requirements of their business.

Modelers understand the connection between how the data is in reality and how the business needs to see it.

**Methodology**

Methodology refers to a systematic approach, including principles, best practices, and procedures, applied to a given area.

Most methodologies include a template you can customize to suit your business needs. A methodology usually represents a package of planning, design, and implementation practices that are coherent, consistent and repeatable.
Migration

Migration is the process of replicating application content from one product to another product.

Moving from IBM Cognos Series 7 to IBM Cognos Business Intelligence includes two technical approaches to migration: lift and shift, and compress and optimize.

Migration tools

Migration tools are intended to help customers migrate to IBM Cognos Business Intelligence, so they can leverage much of their work and investment in IBM Cognos Series 7.

The tools are available to help you migrate metadata, IBM Cognos Impromptu catalogs and reports, IBM Cognos PowerPlay applications, and Upfront content to IBM Cognos BI.

Note: As announced in IBM Cognos BI 10.1.1, some migration tools are deprecated in IBM Cognos BI 10.2.0. The following migration tools are not available in IBM Cognos BI 10.2.0.

- The IBM Cognos Migration Assistant command line tools are not included in the IBM Cognos Business Intelligence 10.2.0 release.
- The options to open a PowerPlay report in IBM Cognos Report Studio or IBM Cognos Analysis Studio are not available in the IBM Cognos Business Intelligence 10.2.0 release.

To migrate IBM Cognos Series 7 Impromptu or IBM Cognos Series 7 Architect content to IBM Cognos Business Intelligence 10.2.0, use the IBM Cognos Business Intelligence 10.1.1 version of the migration tools to migrate to 10.1.1. After you migrate, upgrade the 10.1.1 content to IBM Cognos Business Intelligence 10.2.0.

You can continue to migrate IBM Cognos Series 7 PowerPlay content to IBM Cognos PowerPlay by using the Migration Assistant that is included with IBM Cognos BI PowerPlay. For more information, see the IBM Cognos PowerPlay Migration and Administration Guide.

Models

A physical or business representation of the structure of the data from one or more data sources.

A model describes data objects, structure, and grouping, as well as relationships and security. A model, called a design model, is created and maintained in Framework Manager. Transformer is used for PowerCube designs. The design model or a subset of the design model must be published to the IBM Cognos server as a package so that users can create and run reports.

Packages

A package is a subset of the dimensions, query subjects, and other objects defined in the project in IBM Cognos Framework Manager or the PowerCube built from IBM Cognos Transformer.
A package is what is published to the IBM Cognos server, and it is used to create reports and ad hoc queries. Packages can be published from Framework Manager, Transformer, or IBM Cognos Administration.

### Reporting

Reporting provides the ability to answer fundamental questions about your business by providing insight into your data.

There are several types of reporting:

- **managed reporting**
  Provides an answer to a specific business question, such as monthly revenue, for example a standard weekly or monthly report generated from a data warehouse. The report is usually distributed to various consumers, such as business managers or other senior managers.

- **ad hoc reporting**
  Provides business managers with the ability to create additional dynamic report content, for example delivering self-service access to the system so they can find answers to specific questions.

- **production reporting**
  High-volume reporting generated from transactional sources. Reports usually contain complex formatting, and includes such things as invoices for purchases.

- **operational reporting**
  Real-time reporting from transactional systems or financial systems that provides immediate visibility into data. For example, product sales in a supply-chain environment provides immediate visibility.

- **analytical reporting**
  For business manager who need to see trends at a high level and be able to slice and dice and drill into information from various sources. For example, a sales manager who needs to view revenue by geography, date, and salesperson, and drill into that data to determine the reason for a particular result.

### Service Oriented Architecture (SOA)

A service-oriented architecture consists of a collection of services that communicate with one another.

The services are self-contained and are defined in the context of business-level terms. The services are platform neutral, and loosely coupled, and do not depend on the context or state of other services. They work within a distributed systems architecture. Services are built based on accepted standards which allow them to be integrated into solutions based on business need.

An SOA provides agility to businesses by separating business processes from the underlying technology infrastructure. IT can then manage the technology by either creating and reusing services or by connecting them to others via Web Services protocols to form entirely new applications.

### Upgrade

Upgrading is the process of replacing a version of a product with a newer version of the same product.
User communities

User communities represent groups of users within an organization that interact with parts of a product. Each member of a community has the same set of needs, although their jobs may be different.

Grouping users into communities helps to identify motivations, expectations, and goals of real users and what products or components they use to accomplish their goals.
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