

QueBIT®

Migrating to TM1

The future of IBM Cognos Planning,
Forecasting and Reporting

QueBIT Consulting 2010



IBM. Information Management software

IBM INFORMATION MANAGEMENT SOFTWARE



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About QueBIT Consulting

- QueBIT Consulting is an IBM Premier Business Partner with over 700 clients and covers the entire IBM Cognos product line. This includes Cognos Enterprise Planning, Cognos Finance, Cognos Business Intelligence and Cognos TM1.
- QueBIT has more than 10 years of experience with Cognos EP, Cognos Finance and Cognos BI. In 2008, QueBIT acquired Creeth Richman, a leading TM1 Partner with more than 20 years of experience with TM1.
- The QueBIT consulting team is comprised of professionals with over 20 years of accounting, financial planning and reporting, and technology experience.
- QueBIT has performed implementations with businesses across a broad range of industries. These industries include financial services, (specifically insurance and banking), healthcare and life sciences, commercial services, manufacturing, and non-profit organizations.
- QueBIT also has a product development team with a successful track record of developing software to enhance or complement the Cognos suite. Examples include OLAPObjects (a web application development tool for TM1), and SCOPE, a tool that provides the framework for controlled financial reporting in Cognos TM1. These products enhance TM1 to become a rich financial reporting environment.

Our experience and expertise is summed up in our tagline:

"QueBIT Empowers Companies to Make Intelligent Decisions Faster"

QueBIT's Implementation Approach

QueBIT's approach to implementing planning & reporting solutions has several distinguishing features.

First, QueBIT uses a standard methodology to many common planning processes. These processes include workforce planning, capital planning, line item detail planning, currency conversion and balance sheet/cash flow planning. This approach allows for faster implementation of these planning processes, meeting the needs of many QueBIT clients, while still allowing the customization that many clients want.

Second, QueBIT uses a skills transfer approach that allows clients to take full ownership of their solutions upon implementation. Clients get involved in the implementation from the very first day, enabling them to learn the software, while implementing their own application.

Finally, QueBIT's depth of knowledge in accounting, financial planning & analysis processes, and OLAP technology allows for quick resolution to implementation questions. QueBIT strives to be a thought leader in the areas of financial analytics and OLAP technologies. As part of this commitment, QueBIT sits on IBM's advisory board. Furthermore, we continually search for new technologies and approaches to ensure the advice we give our clients and IBM is relevant and timely.

Over the last year, QueBIT developed a toolkit for migrating IBM Cognos customers from EP and/or CF to TM1 technology. This toolkit includes both software tools, such as standard Turbo Integrator processes and consulting methodologies to ensure that customers can reap the most benefit from their transition to TM1. The optimal transition to TM1 requires a blend of expertise which is part conversion, and part redesign, to ensure the new TM1 application takes full advantage of TM1's advanced calculation capabilities and scalability.

IBM Cognos Planning and Reporting - Current Environment

IBM Cognos' customer base is comprised of users of Cognos Enterprise Planning, Cognos Finance and Cognos Business Intelligence, or some combination thereof. Some customers use Cognos Finance for both planning and reporting; while others use EP for planning and CF for reporting, and some use EP for planning and BI for reporting.

While these products meet most customer's planning and reporting needs, each individual product has limitations and challenges. Solutions that combine two products for planning and reporting can often be more difficult to maintain.

Cognos Finance

Cognos Finance has a single cube structure with fixed dimension types, a limit to the number of dimensions and limits to the number of elements within a dimension. Large cubes can have significant performance problems in terms of calculation times and report retrieval times.

Data is stored in separate submissions, often broken out by year, currency and plan type (such as actual, budget, and forecast). Calculations must be performed when data is loaded from an external source or input by an end-user. Furthermore, the database must be calculated each time allocations or currency conversions are run. These calculations can require several hours to run, depending on the amount of data and level of complexity of the calculations and dimensions. Likewise, when data is loaded from an external source, it can take a significant amount of time to load a single data set, depending on the volume of data.

Complex calculations can be difficult to create and support in CF. In some instances, such as computing detailed salary and benefits, these calculations cannot be done in the desired manner. Data entry can happen via the web, however, the Cognos Finance Web client is limited by what can be supported by the reporting module.

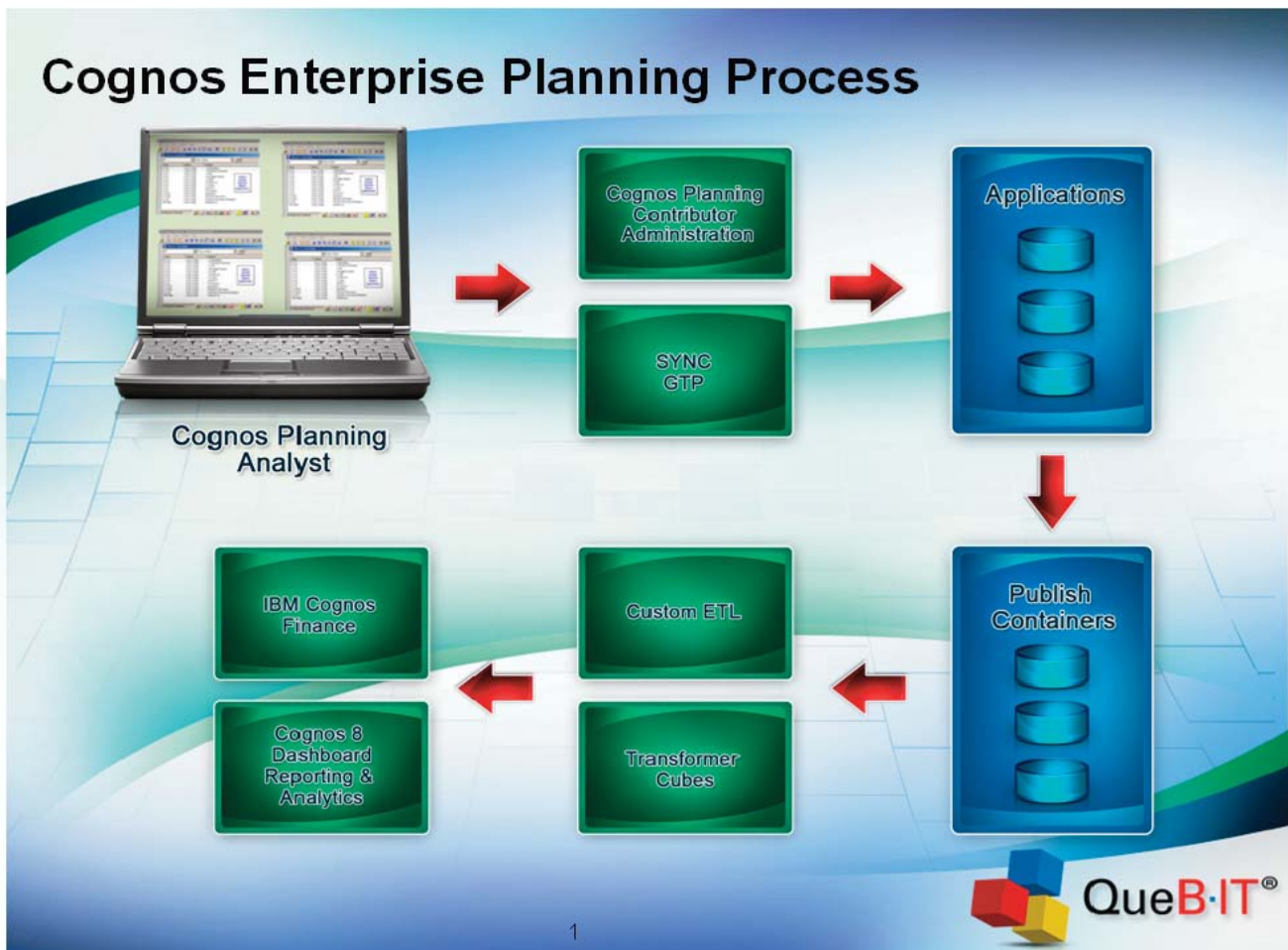
In the area of reporting, Cognos Finance does well in supporting finance-oriented reports, but has limited analytical capabilities, and tends to be finance-only oriented. Complex and asymmetrical reports can be a challenge to create and maintain.

Enterprise Planning and Cognos Finance

Enterprise Planning has a multiple cube architecture which generally supports complex planning needs. This includes supporting complex calculations and the ability to move data from one cube to another. Calculations are limited to a single dimension which, along with cube size limitations, usually impacts the design, resulting in more cubes than the model would require in a TM1 design. Additionally, managing dimensions within EP can be challenging. In some instances, it becomes necessary to manage several dimensions with common elements, so when changes are made, they need to be occur in multiple places. Furthermore, EP has significant size limitations. For most customer models, the maximum application size is reached quickly, necessitating multiple applications to support the planning process. This can result in having separate applications for revenue, workforce planning, operating expense planning, etc.

The biggest challenge in the EP environment is managing changes to analyst/contributor and moving data into and among applications. Each change to the model and loading of data requires a GTP process, which can take hours, depending on the size and complexity of the model. Likewise, processes need to be run when data is moved from one application to another.

Once users have finished entering their plan data in contributor, another process (publish) must be run to extract the data to be used for reporting. Then, a further step may be required to pull the data into the reporting tool. In the case of CF, a file processing and calculation process must occur before the data becomes available for reporting.



There is a significant amount of overhead in managing both the EP and CF applications. Metadata and data must be maintained in two places and kept in sync. In some instances, metadata in the two systems is not the same, which requires mapping tables to be maintained. Data must be moved across multiple EP and CF applications, while data reconciliations must happen in both systems. This is a time consuming process.

IBM Cognos Planning and Reporting - Future Direction

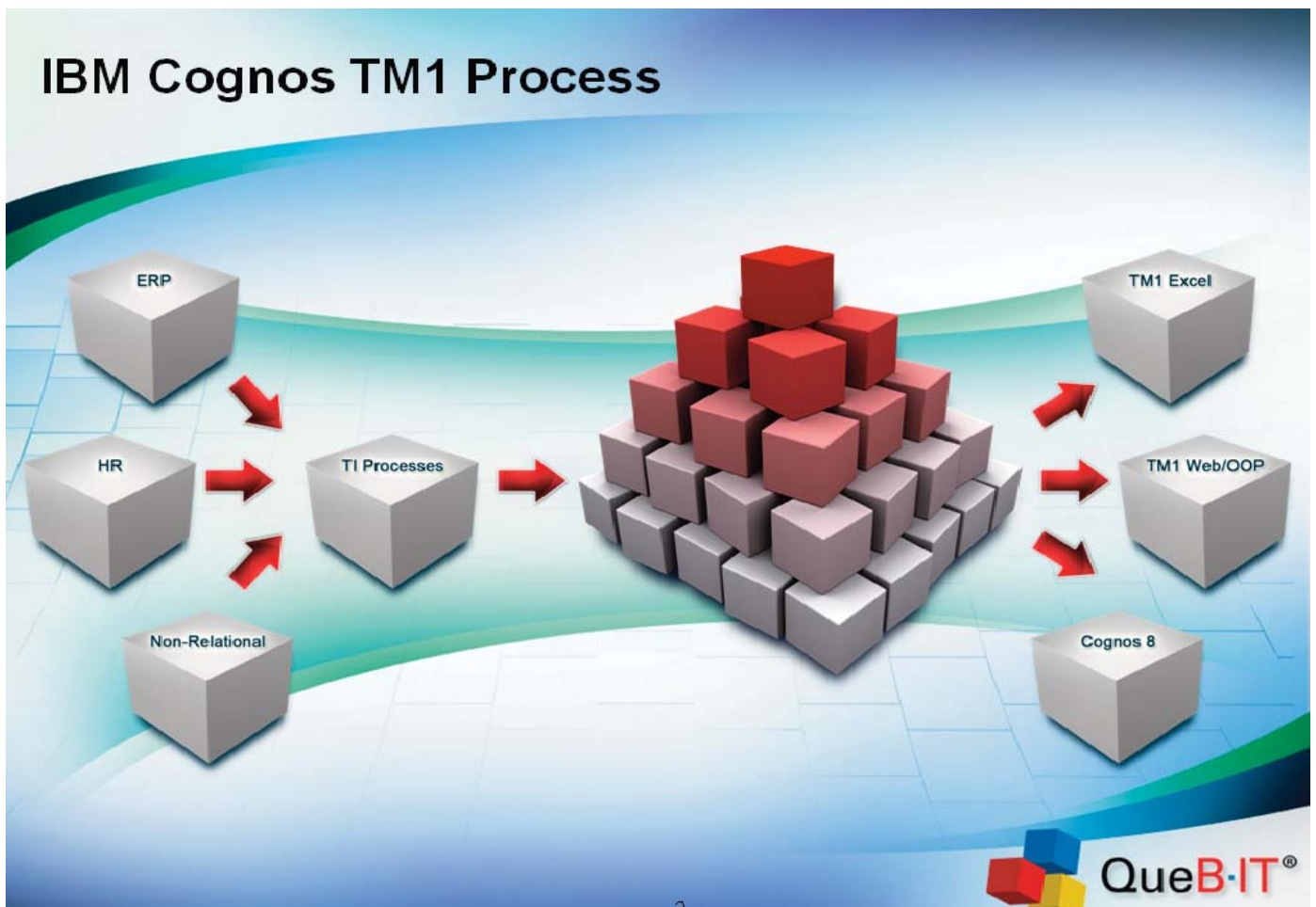
The future roadmap for IBM Cognos planning and reporting tools includes harnessing the power of TM1 with the intuitive user interface of contributor. Cognos Finance will have limited new enhancements, if any. EP Contributor functionality is now in TM1 9.5. The TM1 calculation engine is replacing analyst as the modeling tool. So, while these products will be supported going into the future, new development is going into further enhancing TM1.

TM1 Overview

Architecture

TM1 has, at first glance, some significant similarities to EP. It uses a multi-cube architecture and supports complex, cross cube calculations. However, TM1 uses an in-memory architecture and is available in a 64-bit version which supports large amounts of memory. The upper memory limit is actually set by the hardware, but these limits are not reached on the 128 GB servers available today. TM1 can support much larger cube and dimension sizes, which translates into TM1 applications typically having fewer cubes and a cleaner design than their corresponding EP equivalents. TM1's calculations can be cross dimensional, whereas EP's calculations are confined to a single dimension within the cube.

TM1 is a pure client/server application. It comprises a server which caches all the cubes and dimensions in RAM, while providing several different client tools. The most common client tools are Excel (popular with financial analysts) and a web client interface which greatly simplifies the deployment of a TM1 application.



Feature Set

The primary differentiating feature of TM1 can be found in its efficient calculation engine and its method for storing data. Most, if not all, other OLAP applications store data on disk. When users enter data into other planning applications, a read/write from the hard disk is required. These applications require a calculation of the database to reflect changes in items that have calculations associated with them. In contrast, TM1 calculations and data storage happen in RAM, so data that is entered is immediately calculated and retrieved. As a result, data is available real-time, providing reports that can be generated at any time, while reflecting the current state of the database.

The second differentiating feature of TM1 is scalability. TM1 cubes have the ability to hold many dimensions, and these dimensions have the ability to hold many elements. It is common to have customer lists, organizational units or product lists containing tens of thousands of elements. Additionally, it is possible to hold multiple, unlimited hierarchies of these elements.

TM1 comes with a built-in tool for building or updating dimensions and for loading data. This tool, (Turbo Integrator), can be used to pull data from many sources, including relational databases used by all modern ERP systems, Excel spreadsheets, and text files. It can also be used to automate processes such as adding years to a time dimension and zeroing out portions of the database. This efficient ETL tool allows for significant reduction in cycle time in the administration of a TM1 application. Large volumes of metadata and data can be loaded and calculated within minutes.

In the most recent release of TM1 9.5 in December 2009, both TM1 Web and TM1 Contributor included the 8.4 Contributor user interface from Enterprise Planning. This intuitive user interface will be familiar to any existing Contributor customer.

Finally, TM1 has a very strong feature set. The feature set includes a robust Excel add-in called Perspectives, which can be utilized for development of an application, input to the database, and reporting. Security is also strong, with the ability to secure each individual cube, dimension, or process, including cell-level security. TM1 Web has slice & dice, nesting, "sandboxing" and graphing. TM1 offers a robust, centrally-managed, real-time, planning, forecast, reporting and analysis tool.

Migrating to TM1

The process of migrating from EP to TM1 should not be perceived as a conversion. Certainly an EP model could be converted directly into TM1, but to do so would cause the TM1 model to inherit some of the design characteristics of the EP model, which are not required by TM1 and would not take advantage of the strengths of TM1. Rather, the process should be one of redesign, with selective re-use of some EP components. QueBIT has developed conversion tools and methodologies which facilitate conversion of EP components to their TM1 equivalents. The ultimate goal of a successful TM1 implementation is to optimize the design of the planning model.

The first step in the process involves a design review to identify the areas where TM1 can be leveraged to meet customer requirements. The metadata and data sources are identified during this phase, to determine the best process for loading into TM1.

A re-evaluation of the business logic then takes place, in order to identify potential enhancements. Since EP has certain size and design limitations this is an appropriate stage to identify where EP design compromises have been made and improve upon them.

A review of the end-user input and reporting tool should also occur. During this review, there are several options, depending on the needs of specific end users. These users usually fall into one of several categories: *super users*, such as finance professionals; *contributors*, such as department or revenue managers; and *reviewers*, such as senior management. TM1 has the flexibility and power to answer the unique needs of these user groups.

Conclusion

Cognos customers utilizing Enterprise Planning, Cognos Finance or Business Intelligence would derive many benefits from migrating their planning and reporting applications to TM1. There are many benefits, including, but are not limited to: combining the strong features of native TM1 with the intuitive contributor interface; creating a more robust and exact planning model; reducing the overhead of managing multiple applications and multiple tools; and generating flexible, real-time reporting.

TM1 has the features and power that many Cognos customers have requested over the years. The integration of contributor with the robust feature set of TM1, takes the best of both worlds and combines them into one seamless product.

QueBIT has the knowledge, experience and expertise to successfully migrate your planning and reporting applications to TM1.

QueBIT is an IBM Premier Partner, specializing in IBM Cognos Performance Management Solutions. QueBIT has managed more than 700 implementations of Cognos across many different business sectors that solved a broad range of business problems, including financial reporting and consolidations, budgeting, forecasting, what if planning, business modeling, financial analytics and business intelligence. To find out more information on how QueBIT can work with your organization to achieve results, please contact us at 1 800-QUEBIT1, email us at contact@quebit.com, or visit our website: www.quebit.com