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5 Things Data Architects Need to Know About Better Collaboration with Business

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Helping You Add Business Value to Your Information Management Resources

#TEAMDATA

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It's All About Supporting Business

When architects provide technical solutions for business problems, we sometimes get lost in the technical details of those solutions. At times we fail to be mindful of the real reason why technology is deployed in the first place: to support successful business operations.

With this goal in mind we need to make sure that our projects have high levels of business input throughout our projects. One of the critical success factors is a strong relationship with the business.

Our previous whitepaper, "7 Steps Every Successful Data Architect Follows to Build Stronger Teams" looked at steps architects can take to ensure that Information Technology (IT) resources are working together towards the same goal, with the right approach.

Collaboration among members of an IT team is natural for most of us. Within the IT team, our own procedures and language create a familiar environment to understand and be understood.

However, collaboration with business clients often falls short of the effectiveness that would create the highest-quality projects. Functional specifications don't always map directly to business needs and business user requirements can get lost in the technical translation.

Improving interaction with our business clients ensures that what our teams produce moves our business forward. This paper discusses five things you can do right now to improve collaboration with business users.

Encouraging Collaboration

How can we encourage stronger collaboration with team members from the business side of our organization?

We architects need to produce models that deliver real business value, but we can't do that on our own, no matter how skilled we are in the arts and sciences of design. We must have access to business users who have a significant depth and breadth of domain knowledge and who are energized about collaborating on these designs.

In order to encourage better business collaboration, we recommend teams address these issues:

- **Use common tools when applicable.** When business users and IT professionals use different tools, it is much more difficult to work together on models. Imagine if every input received from a business user was provided only as a printed page. It would have to be

rekeyed, even if it were thousands of items. When architects provide only paper printouts of their models, they are putting the same burden on business users.

- **Create deliverables that are tailored to the audience.** IT professionals shouldn't expect business users to use the same artifacts that database administrators and developers use. Business users have a different goal when reviewing models: to validate the completeness and correctness of requirements. Using the same deliverable for both business and technical audiences will most likely dampen the spirit of both audiences. The best solution, though, is to provide a method for users to supplement standard deliverables with their own user-created content based on those deliverables.

- **Remove unnecessary processes that stand between business users and the models**. Having to negotiate for every access to the model discourages use of the models and their content. Business users should have self-service access to their models, in formats that they are used to working with.

- **Give business users what they need, too**. If models are positioned as IT-only artifacts, management has very little motivation to provide resources for collaboration on their development. Business users who have on-demand, user-friendly access to models, are much more likely to make use of them on a frequent basis. When executives see their staff using models as part of their every-day business processes, they will be much more likely to provide proper resources.

- **Let business users discuss and contribute**. Business users should be able to engage with models and metadata by commenting and asking questions, not just in email threads. By providing social engagement with modeling objects, users can be part of the process of capturing data requirements.

Removing obstacles to collaboration is the first step in encouraging better collaboration with the business. In the next section, we look in more detail how to enhance collaboration by encouraging business use of the models.

Engaging the Business

How can we increase the business value of the models we produce?

Most IT professionals have a good understanding that what we do is important for delivering timely and high quality information to our business users, but sometimes we struggle with getting business users more engaged. Let's look at some of the causes for this disconnect.

Modeling deliverables need to support a wide variety of audiences

Many architects produce only one version of models. Since developers and database administrators are seen as the primary audience for these, the model presentations tend to be optimized for development. However, models should also meet the review and validation needs of business users, who clearly have different goals in reviewing models.

We can solve this issue by preparing different views of models for common modeling tasks. Database administrators want to review models for performance and security tasks, while business users want to review models for completeness and consistency with business rules. It makes sense, then, to produce a view of model for the database administrator staff that highlights technical details such as datatypes, primary keys, partition strategies, etc. Views for business users, on the other hand, should focus on providing clarity about business rules and meanings. These business views might suppress technical information that is less relevant to a business user, while translating technical aspects into more readable formats. For example, data model relationship cardinalities can be converted to sentences that are easier to validate than a *1* and *M* on a report.

One of the fastest ways to discourage business use of models is to force them to review irrelevant technical details. Give them their own views of data models.

However, data modeling isn't just about diagrams: it's also about rich metadata properties managed within data models. This is where custom reporting can provide just the right type of data for business users. We'll see more of that below.

Business users want to have access to and engage with data models

When IT organizations fail to provide self-service tools, we limit user engagement with our models, and we send the message that the models are not relevant to the operation of the business. Since business organizations have provided resources to develop and validate models, it makes sense that they should have easy access to use them.

This access can include a variety of methods for accessing those models to encourage frequent use. In our experience, business users who have self-service access to the models have a greater feeling of engagement through the development process. The easiest way to provide on-demand, self-service access to models and their metadata is via IDERA Inc.'s **ER/Studio Team Server**. ER/Studio Team Server is a web-based application for browsing, searching, and reporting purposes.

The home page for ER/Studio Team Server features a set of recent changes and comments, as customized by each user. As seen in *Figure 1 – ER/Studio Team Server Home Page*, a dashboard of recent changes and discussions is presented.

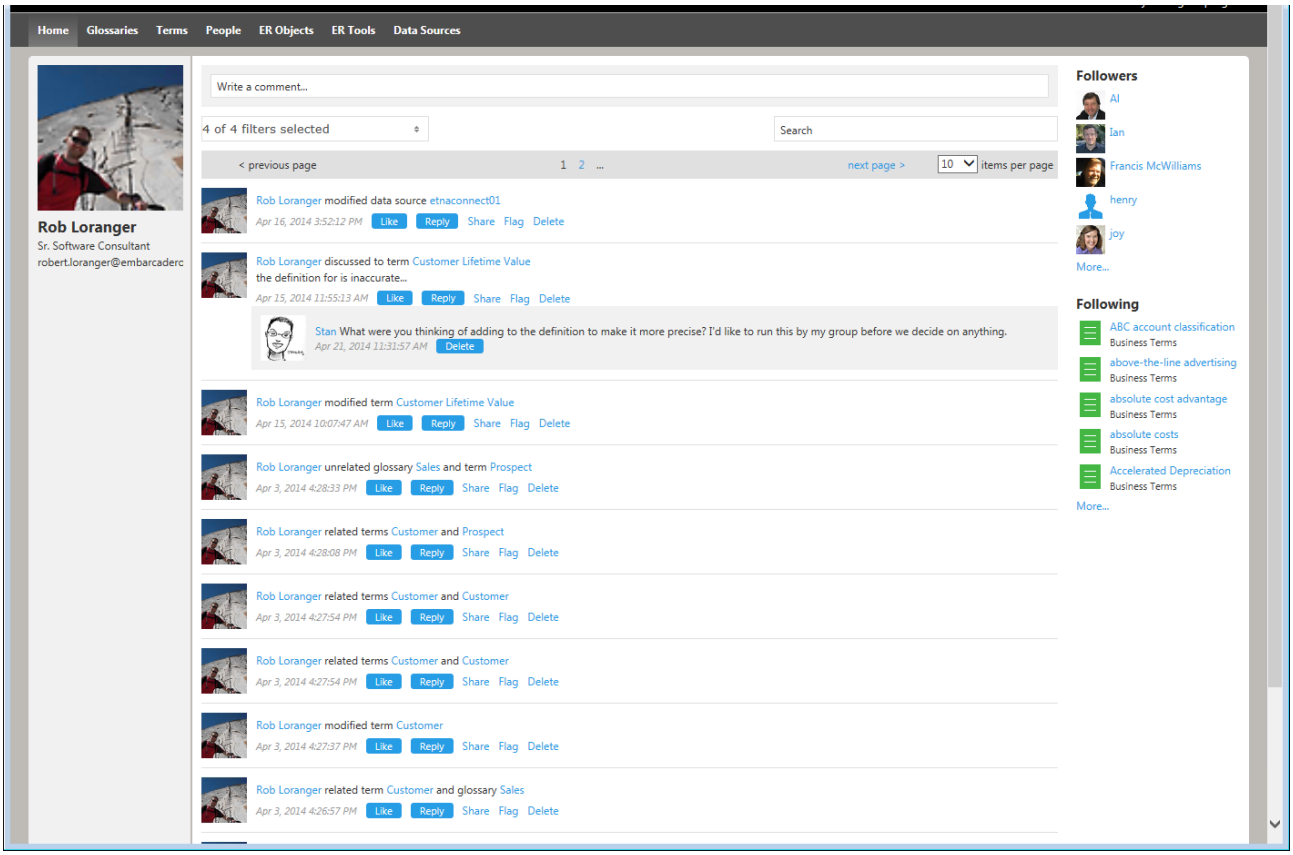

Figure 1 – ER/Studio Team Server Home Page

ER/Studio Team Server loads model information from the **ER/Studio Repository** or from **DBArtisan**, allowing business users to have access to any type of object or property in any model. Users also have the ability to work with model information in the formats and content they prefer.

Business users have access to Glossaries, Terms, Data Models, Data Sources and Data Lineage (Target and Source mappings) metadata via ER/Studio Team Server.

Access to Model Objects

Business users are able to access both the images and the content of models, by modeling project. As can be seen in *Figure 2 - Exploring Models,* ER/Studio Team Server allows a user with the proper access rights to explore all the projects and model diagrams in the ER/Studio Repository. Within each submodel, users have access to all the metadata contained in that model: definitions, object names, datatypes, constraints, security properties, privacy properties, etc.

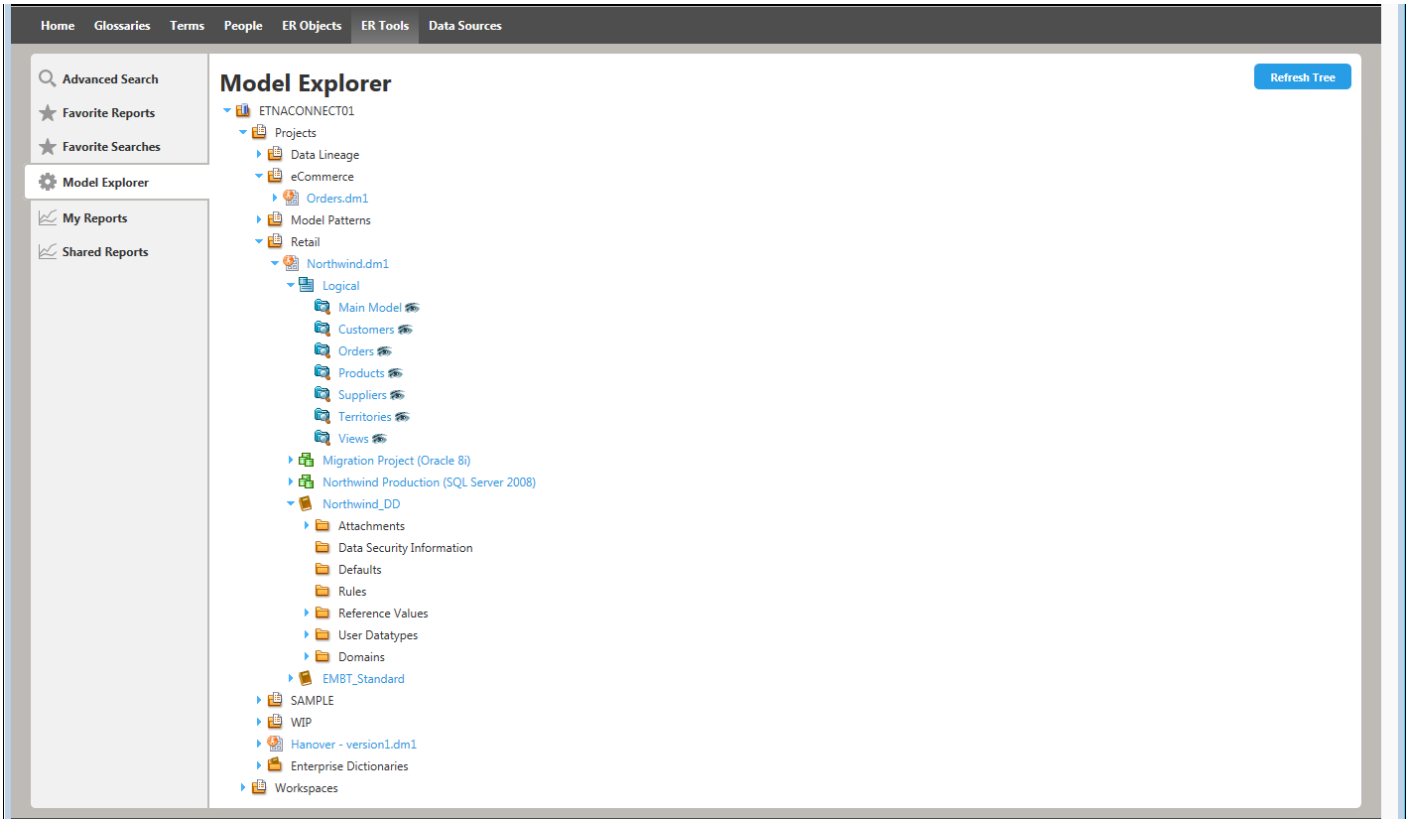

Figure 2 - Exploring Models

Modeling diagram images can also be viewed and printed as shown in *Figure 3 - Data Model Image.* Business users will be able to print data models without having to request printouts from data architects, saving both significant amounts of time.

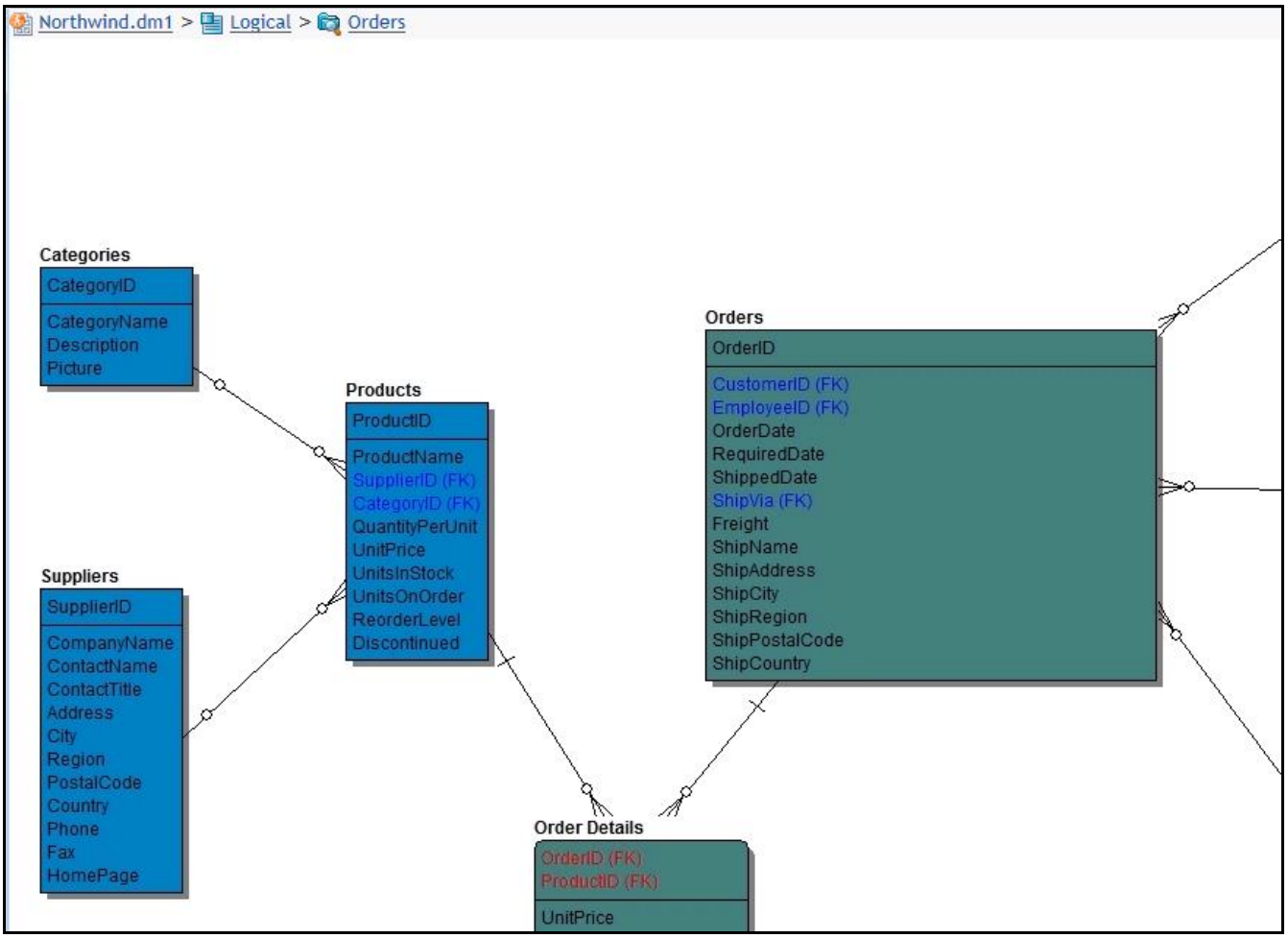

Figure 3 - Data Model Image

Business users can search for and interact with data model without having to learn a data modeling tool. They can drill down to get even more detail without the assistance of IT professionals.

Figure 4 - Entity Definitions and Properties shows how both business and IT users can drill down from a data model to view a specific entity and its metadata.

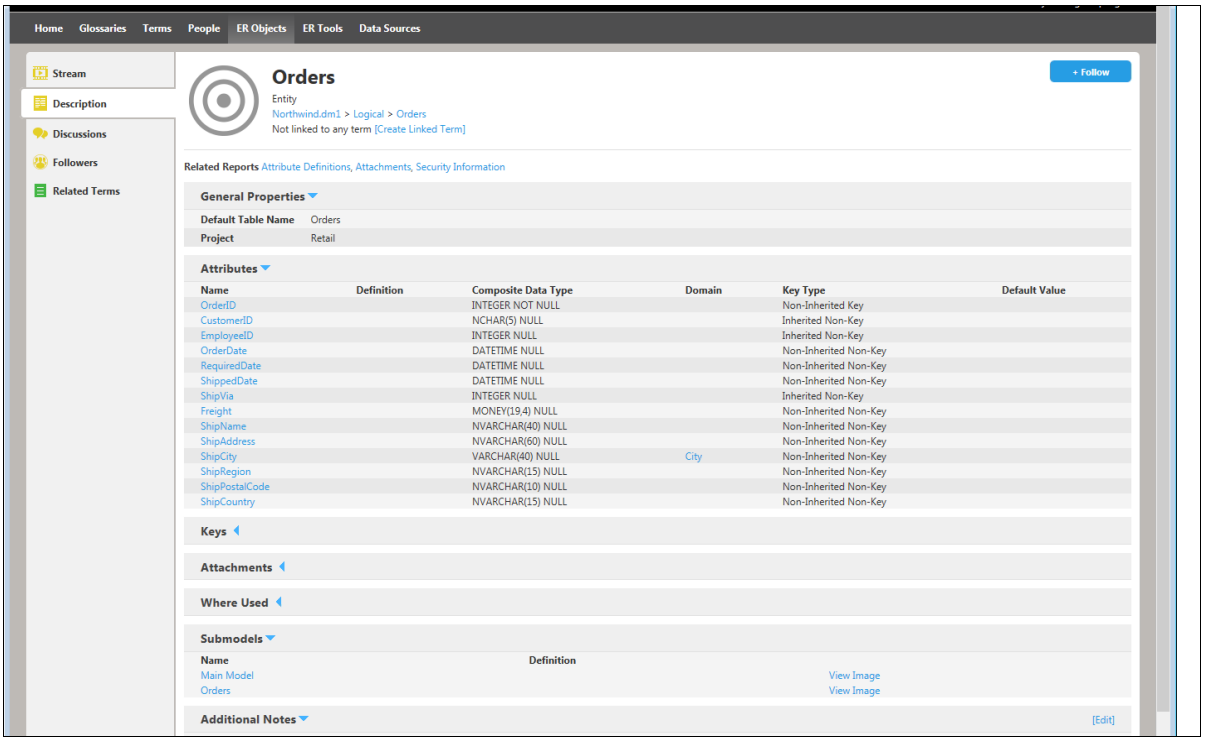

Figure 4 - Entity Definitions and Properties

A user can *follow* (blue button in upper right of page) an object or term so that he or she can monitor updates and enhancements. This is especially valuable for data stewards and other governance participants.

Business users need to work with more than drawings

While drawings are a very important aspect of modeling, they are not models without the underlying meanings and properties added. In fact, using a drawing alone may lead to more misunderstandings and errors than not using one at all. The objects on a diagram are really symbols of much more complex, detailed concepts than the boxes and lines can adequately convey. The underlying information contained in the data models, *metadata*, describes meanings, uses, security, privacy and data governance aspects of information systems supported by the data models.

When an architect provides only diagrams to business users, they are less likely to be able to properly validate their correctness. They are also less motivated to provide in-depth content that is required, as there is very little return on their investment if they aren't given access to that content. However, when architects record and provide access to all the contents of models,

business users can leverage that information for their own use. This type of win-win situation encourages further collaboration.

Business Glossaries and Terms

In addition to working with logical and physical data models, data architects can add business value by providing terms and definitions that are independent of database and data model. Business glossaries allow business users to define concepts without worrying about project or application package-specific views of those concepts. *Figure 5 - Business Glossary and Terms* shows a sample Customer Service glossary and *Figure 6 - Sample Term* provides an example of the rich definitions possible for a business term.

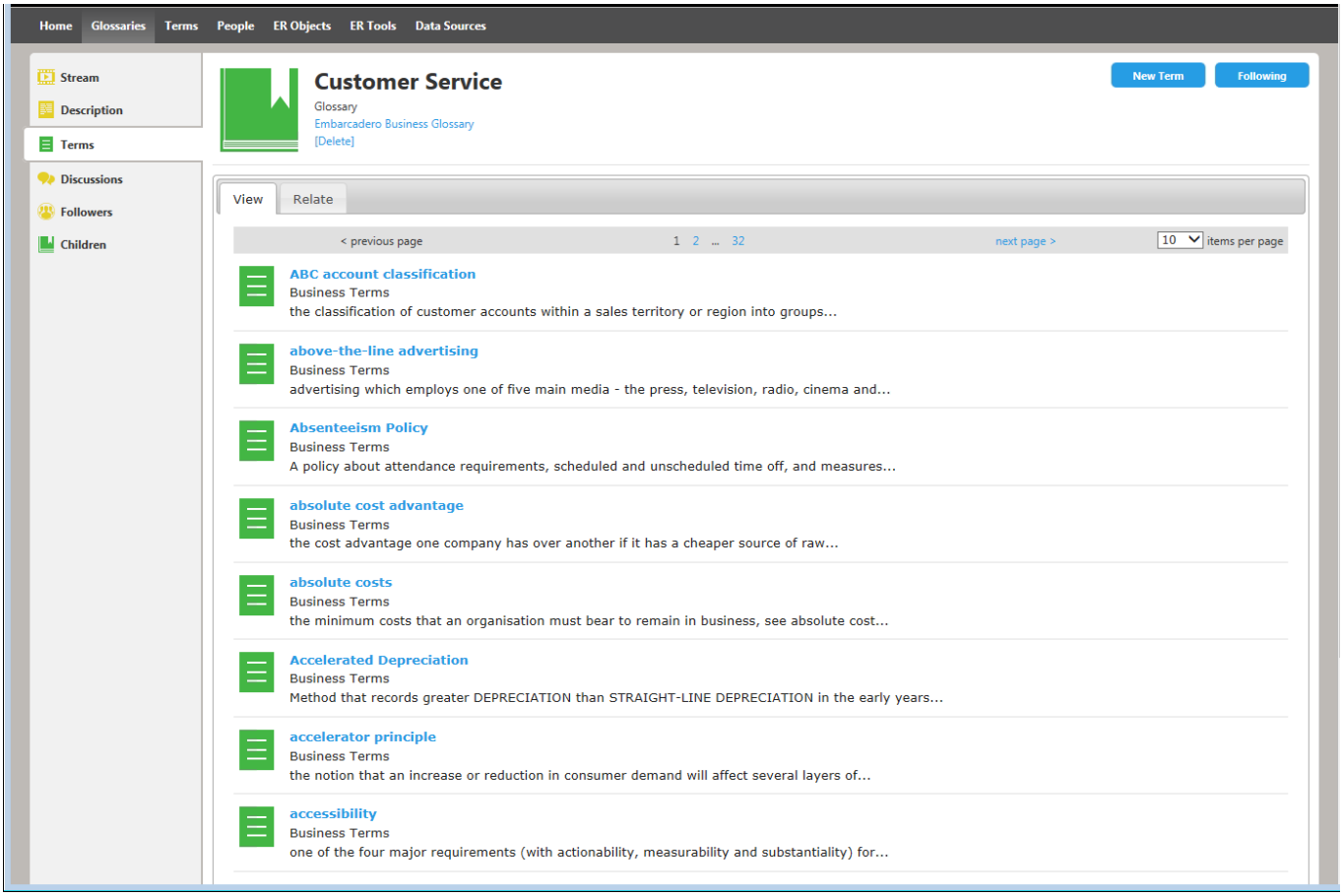

Figure 5 - Business Glossary and Terms

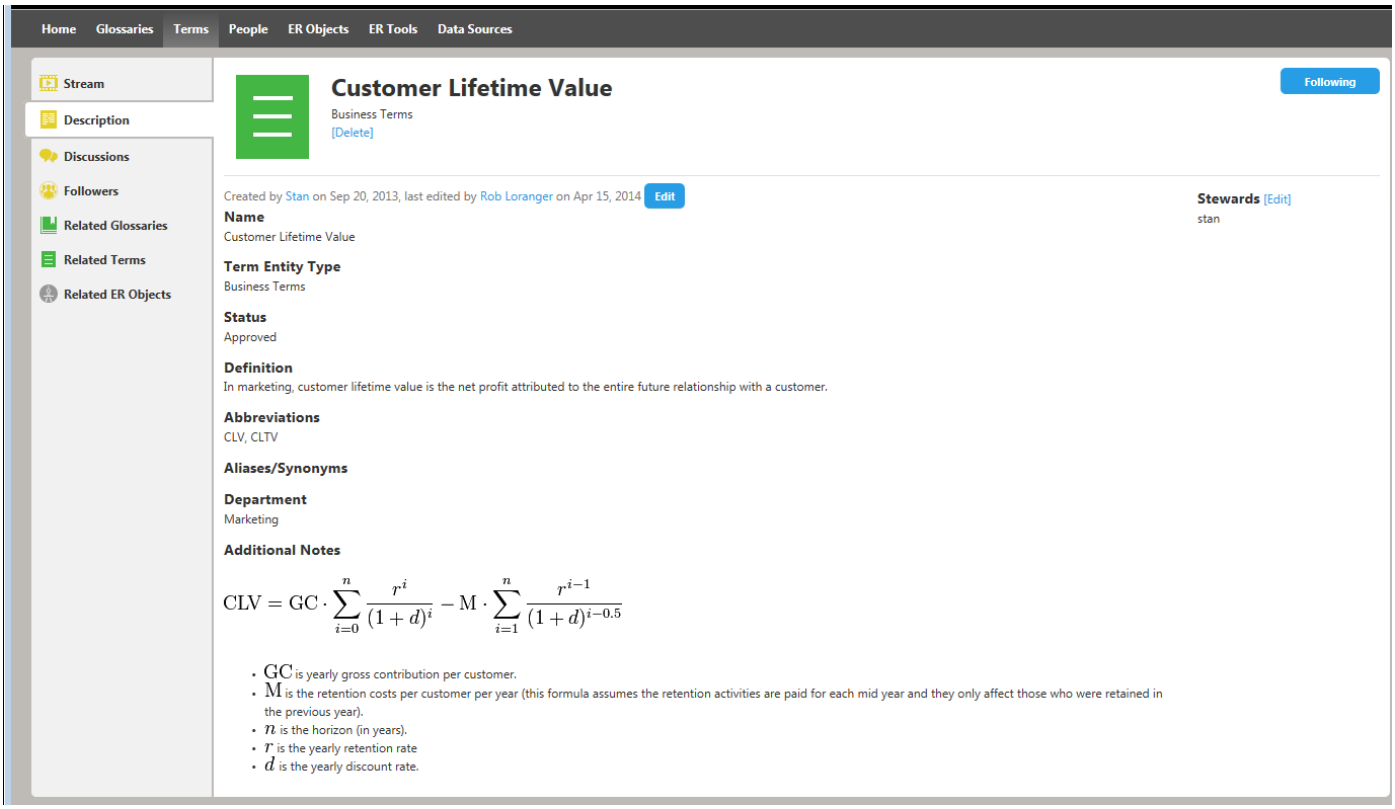

Figure 6 - Sample Term

User Engagement

The traditional method of capturing user comments and questions about business terms and models has been in-person meetings and chaotic email threads with what always seems to be random recipients. With ER/Studio Team Server, business users can engage with modeling objects directly. As seen in *Figure 7 - Business Term Discussion*, business users can ask questions, see answers, and provide feedback on ER/Studio Team Server items.

These discussions aren't lost in a series of emails, and they aren't constrained to a single in-person discussion. Modelers and other business users can view and contribute as needed.

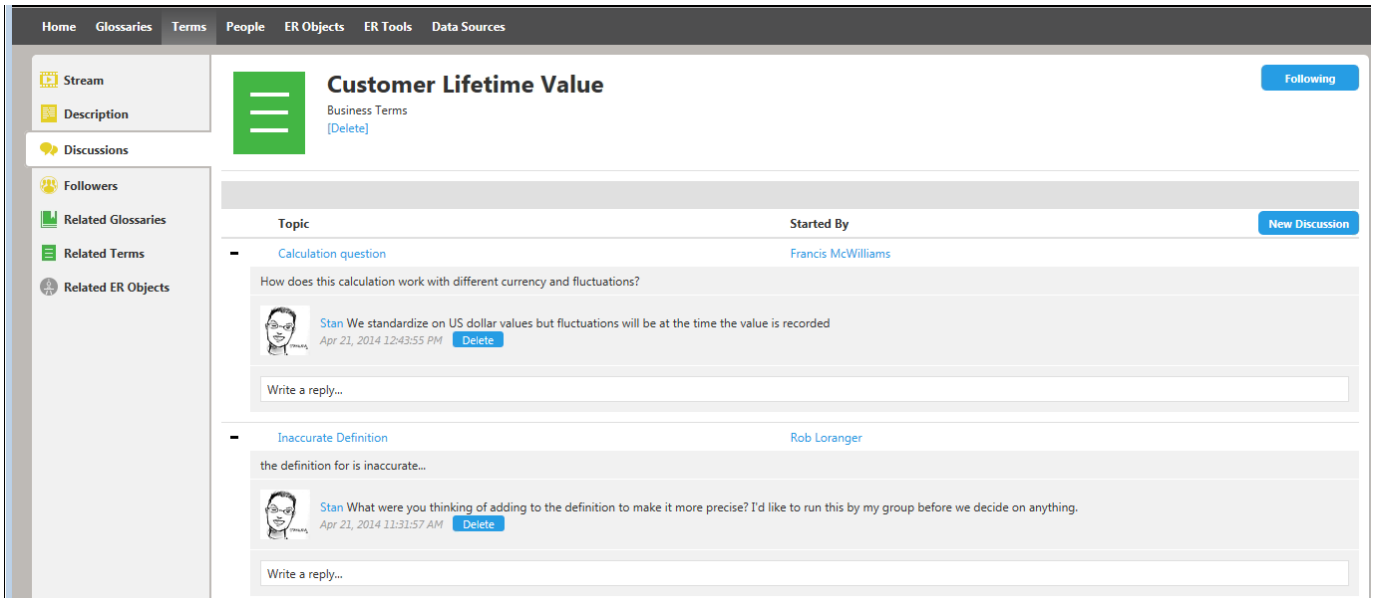

Figure 7 - Business Term Discussion

Business users want to access models in formats they already use, seeing only the information they want to see.

If models and their underlying information are produced for a technical audience only, business experts can miss important review opportunities as they struggle to wade through extra modeling information. For instance, a business user may need to verify that we have a common understanding of what makes one transaction different from another transaction, but they rarely need to see that we are using a SQL Server *SEQUENCE* to make this distinction.

One of the strengths of the ER/Studio Team Server is that it offers features that make it easily usable for both technical and business users.

ER/Studio Team Server Business Reports

ER/Studio Team Server offers the ability for users and portal administrators to create standard reports. This availability gives business users who may not be as familiar with modeling object and property types to quickly generate the reports they need. *Figure 8 - ER/Studio Team Server Reports* shows some sample shared business reports, including attribute definitions, entity definitions, and business rules.

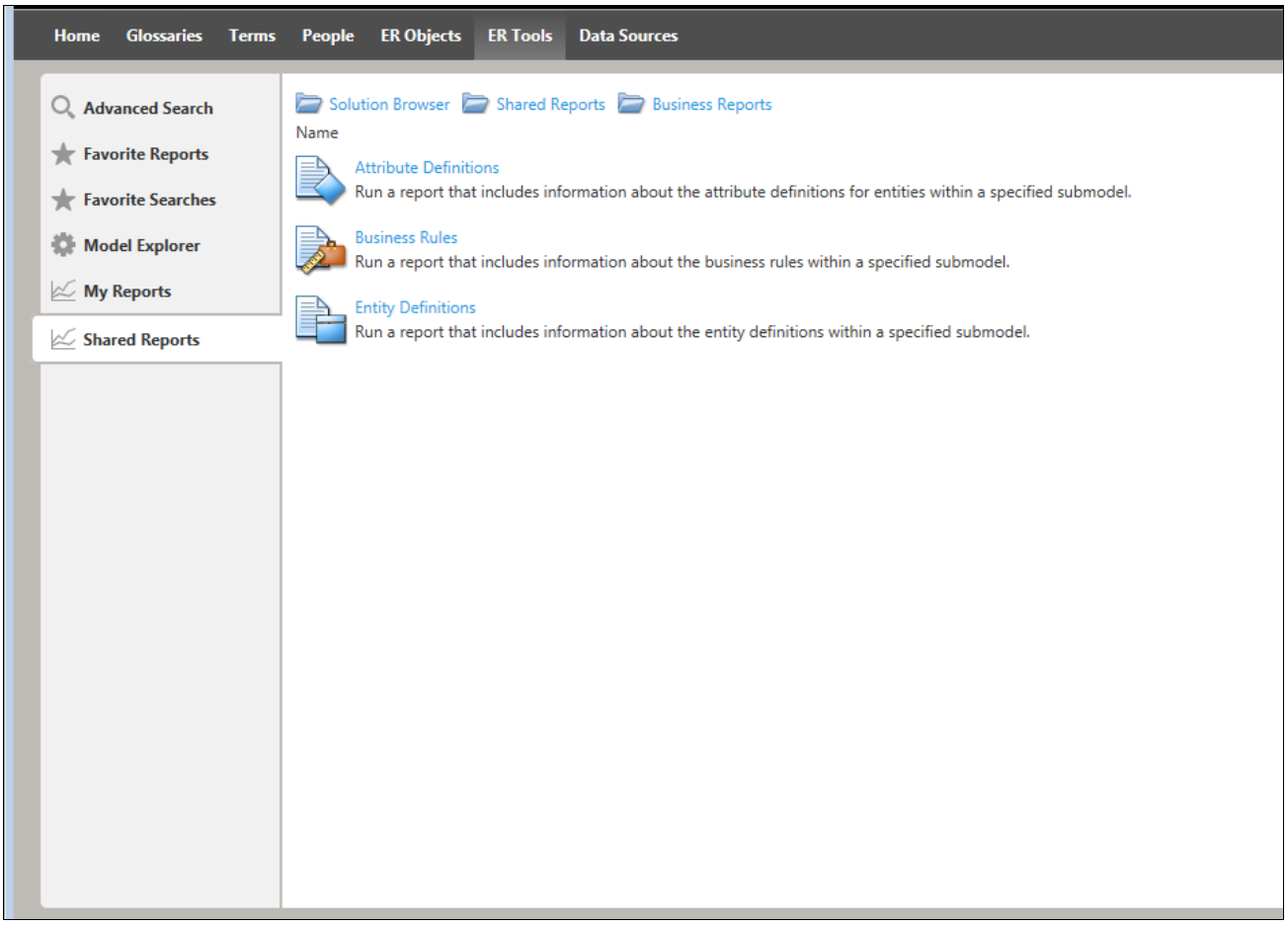

Figure 8 - ER/Studio Team Server Reports

Export to Microsoft Excel or Comma Delimited File

Once users have created a shared standard report or an ad hoc report, they can save those results as a Microsoft Excel or a comma delimited file. This allows users to work with model information in the office productivity tools they are most familiar with. See *Figure 9 – Report Exported to Microsoft Excel* for an example of an attribute report exported to Microsoft Excel.

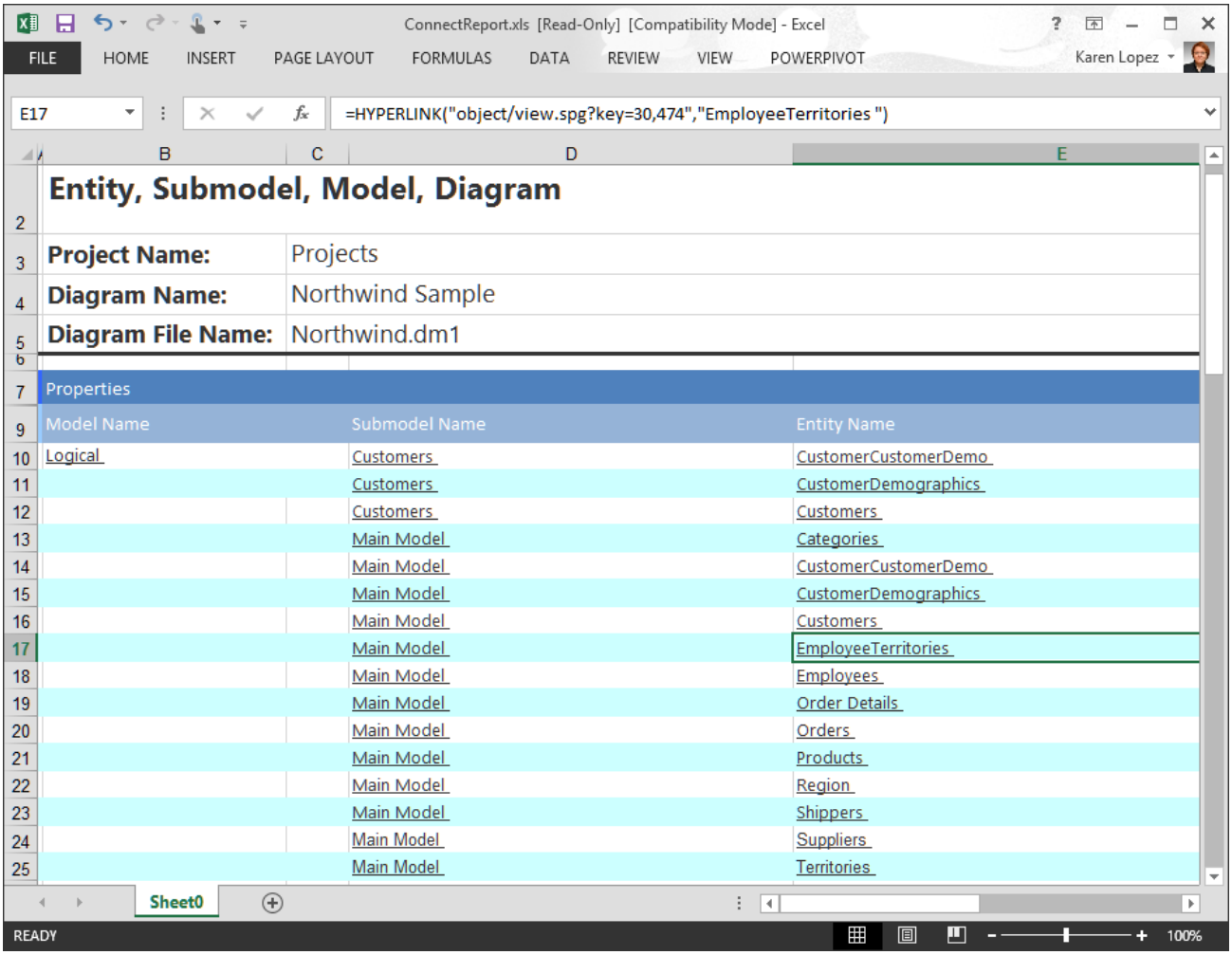

Figure 9 – Report Exported to Microsoft Excel

This feature also allows them to incorporate model information into other documents and presentations. This sort of user engagement is a great way to ensure that users can readily access and collaborate on the models.

Business is not performed in application-driven boundaries

IT budgets are almost always prepared for application projects, not for business functional groups. IT staff are assigned to meet the needs of those specific projects and are measured on their ability to meet those project goals. It is common to see project teams who are measured solely on the success of their project to choose their own tools, methods and deliverables without regard for how the business will access and validate the team's work products. When IT publishes results of analysis in unfamiliar formats, with different content, business users have a much tougher time working with the results.

Since ER/Studio Team Server is based on Repository models, it allows reporting and searching across applications, databases, and diagrams, no matter which team produced those models or how they were developed. Business users especially will appreciate this cross-component access, since they don't have to know the physical database or table name just to find where customer data exists.

ER/Studio Team Server Search

Not only can business users explore models, they can also search across models in the Repository. They can do this based on almost any type of object and properties. As can be seen in *Figure 10 - ER/Studio Team Server Search Options,* searches can be done based on partial word matches.

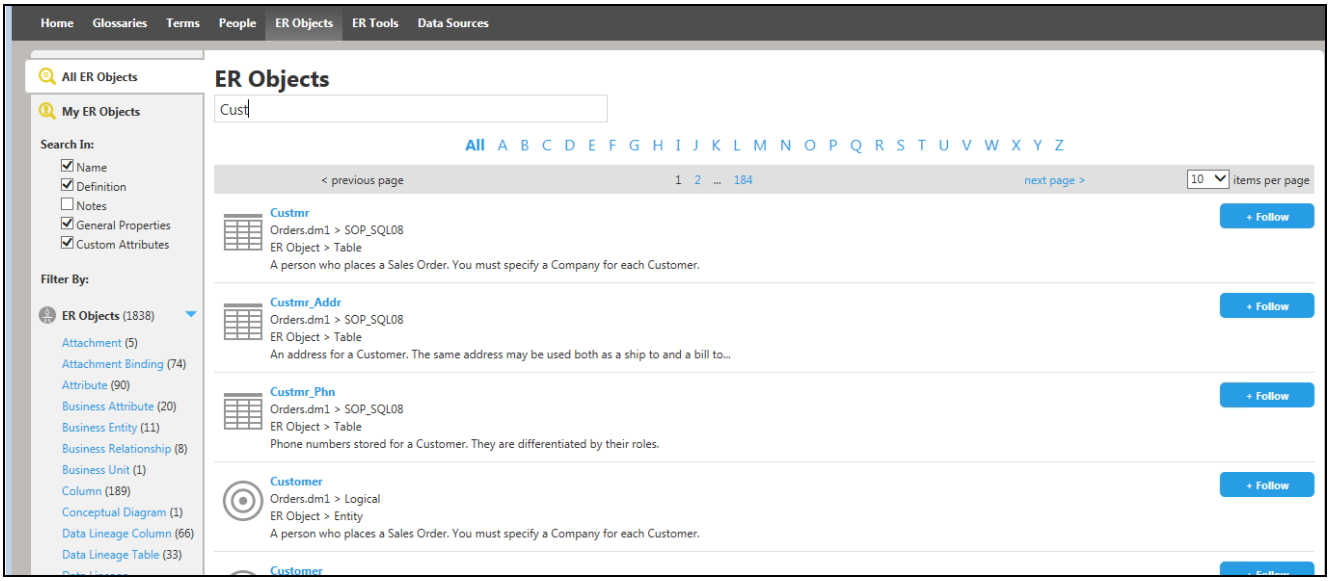

Figure 10 - ER/Studio Team Server Search Options

ER/Studio Team Server Ad Hoc Reporting

Business users don't have to live with someone else's reports; they can create their own based on almost any type of object or property. As can be seen in *Figure 11 - ER/Studio Team Server Reporting Options,* A business user has a wealth of choices for the types of information that can be included in a report as well as how that information is grouped and filtered.

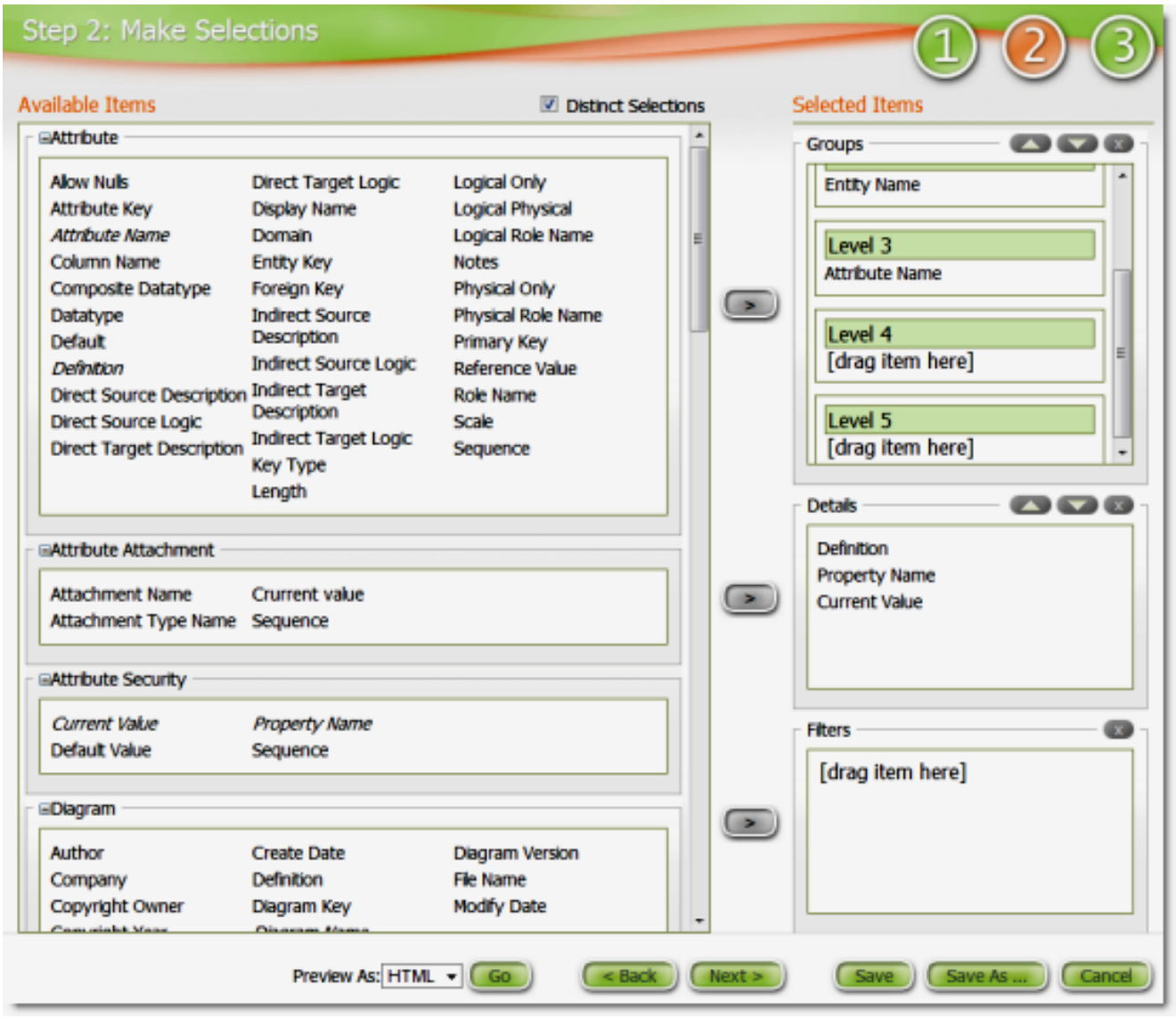

Figure 11 - ER/Studio Team Server Reporting Options

Users do not need to recreate ad hoc reports – they can rerun them at any time from the ER/Studio Team Server home page as seen in *Figure 8 - ER/Studio Team Server Reports*, under My Reports.

Finally…

We IT architects must ensure that business users are engaged in modeling efforts in order to produce designs that will deliver real business value. We need to look to solutions that will remove obstacles to participation in modeling efforts, encouraging more frequent and in-depth use of modeling artifacts.

Easy, familiar access for business use is a key component of successful business-IT collaboration. Business users can be more active in modeling efforts and their managers and executives will have more confidence in the modeling process.

We need to establish a common ground, speak the same language, and provide a comfortable environment which encourages information quality and productivity in order to reach everyone's goal: to support successful business operations.

About the Sponsor

IDERA understands that IT doesn't run on the network – it runs on the data and databases that power your business. That's why we design our products with the database as the nucleus of your IT universe.

Our database lifecycle management solutions allow database and IT professionals to design, monitor and manage data systems with complete confidence, whether in the cloud or on-premises.

ER/Studio is the collaborative data modeling solution for data professionals to map and manage data and metadata for multiple platforms in a business-driven enterprise data architecture.

Whatever your need, IDERA has a solution.

About the Author

Karen López is a Senior Project Manager and Architect at InfoAdvisors. She has more than twenty years of experience in helping organizations implement large, multi-project programs.

InfoAdvisors is a Toronto-based project and data management consulting firm. We specialize in the practical application of project methods and tools. Our philosophy is based on assessing the cost, benefit, and risk of any technique to meet the specific needs of our client organizations.

InfoAdvisors offers data modeling training, including training for non-modelers such as business users, database administrators, project managers and developers.

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