The Five Things Data Architects Need to Know About Collaborating with their Business Users

Five Things You Can Do Right Now to Improve Collaboration and Results for Business Users

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It's All About Supporting Business

When architects provide solutions for business problems, we need to ensure we do not get lost in the technical details of those solutions. We must focus on 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, "Collaborating with Developers and DBAs: 7 Steps to an Easier Project, a Better Product and a Stronger Team" [i] looked at steps architects can take to ensure that Information Technology (IT) resources work together towards the same goal, while using 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?

Creating models that deliver real business value means incorporating feedback from business users. Business users are often eager to contribute to creating solutions that work for them; but first IT must create an environment that makes it easier to communicate with and collaborate with these valuable resources. In order to encourage better business collaboration, we recommend teams:

- **Use common tools.** When business users and IT professionals use different tools, it is 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 was composed of thousands of items. When architects provide only paper printouts of their models, they are putting this 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 their 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 on-demand access to their models, in familiar formats.

- **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.

Removing obstacles to collaboration is the first step in encouraging better collaboration with the business. In the next section, we look at ways 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 realize that 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.

1 **Modeling deliverables need to support a wide variety of audiences**
Many architects produce only one version of a model. 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 problem by preparing specific views of models for different team members. 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 views of models for the database administration staff that highlight 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.

Many people believe the models belong to IT. However many models have aspects that are technology-independent, and therefore should belong to the business organization. Business users can't own what they do not understand. Tailoring how IT refers to models can keep business users engaged. We recommend that these types of models be called *business models* instead of logical models. Taking this further, we refer to physical data models as *business models for the database* and physical process models as *business models for the application* to re-enforce the understanding that models should be all about supporting business processes and information.

One of the fastest ways to *discourage* business users from participating in the collaboration process to force them to review irrelevant technical details just to get to the information they really want to see.

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2 **Business users want to have access to data and process 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.

An easy way to provide on-demand, self-service access to models is via **ER/Studio®
Enterprise Portal**. The Portal is a web-based application that allows organizations to browse, search and report on modeling data. The main page for the Portal can be seen in *Figure 1 - ER/Studio Enterprise Portal.*
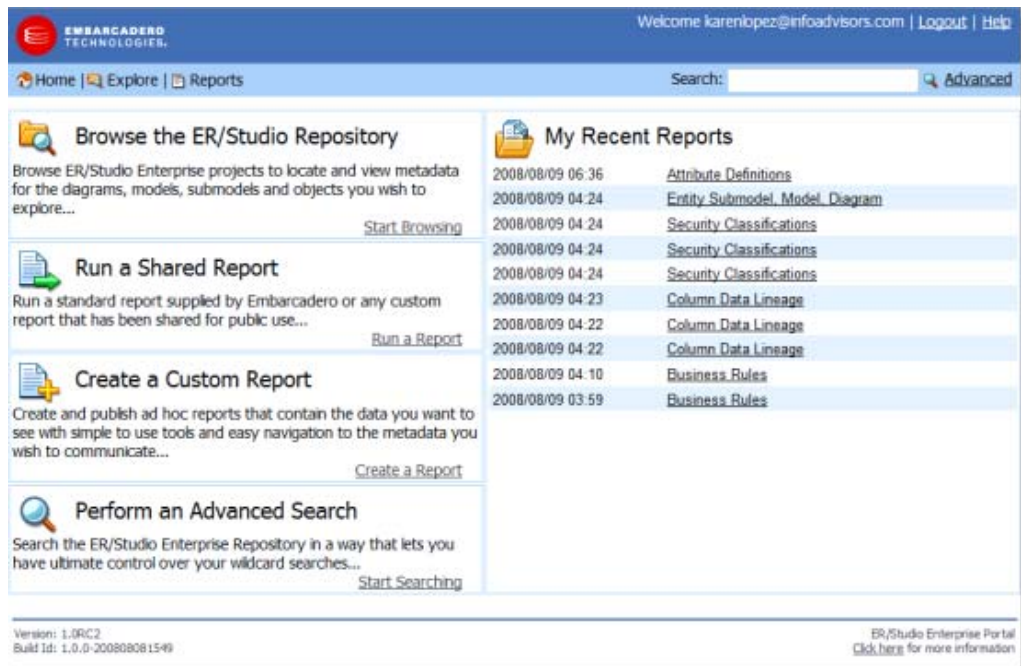

Figure 1 - ER/Studio Enterprise Portal

The Portal loads model information from the **ER/Studio Repository**, 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.

ER/Studio Enterprise Portal for Model Browsing

Business users are able to access both the images and the content of models. As can be seen in *Figure 2 - Exploring Models in ER/Studio Enterprise Portal,* the Portal 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 in ER/Studio Enterprise Portal

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 groups significant amounts of time.
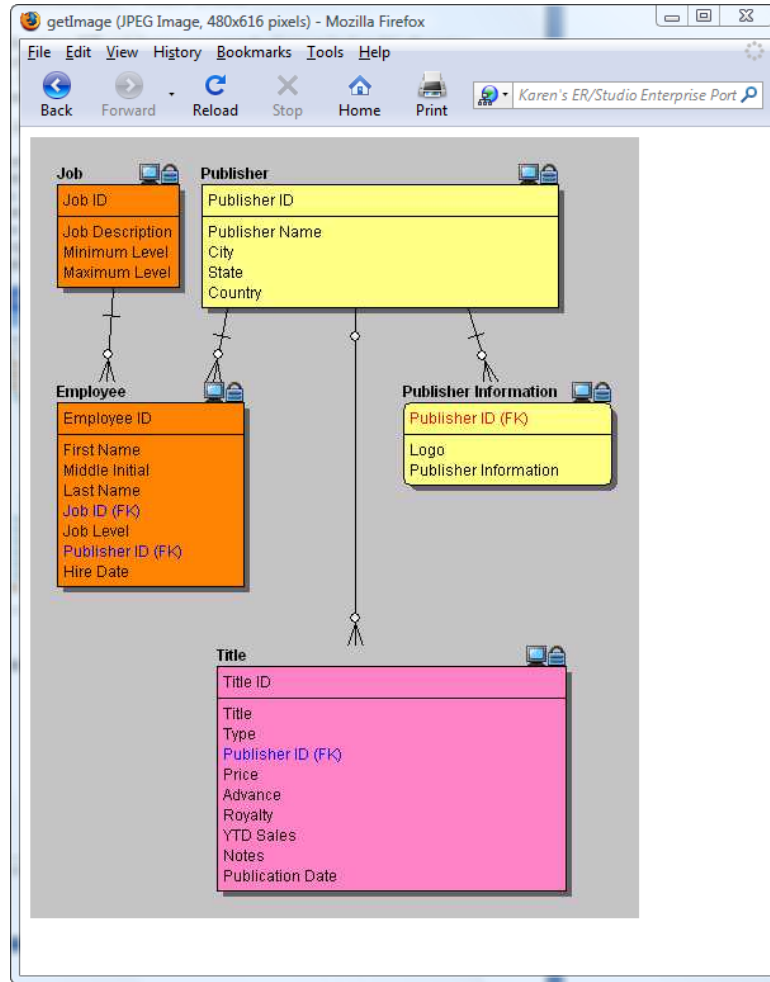
Figure 3 - Data Model Image

3 **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.

When architects provide only diagrams to business users, they are less likely to be able to properly validate model correctness. They are also less motivated to provide the in-depth content that is required, as there is a weaker return to the business on their investment. However, when architects record and provide access to all types of model content, business users can leverage that information for their own use. This type of win-win situation encourages further collaboration.

In fact, the more modeling information is shared and used, the more support management gives to collecting further information in the future.

④ **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 TIMESTAMP datatype to make this distinction.

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

ER/Studio Enterprise Portal Business Reports

The Portal offers the ability for users and portal administrators to create standard reports that can be run as needed. 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 4 - ER/Studio Enterprise Portal Shared Reports* shows some sample shared business reports, including attribute definitions, entity definitions, and business rules.
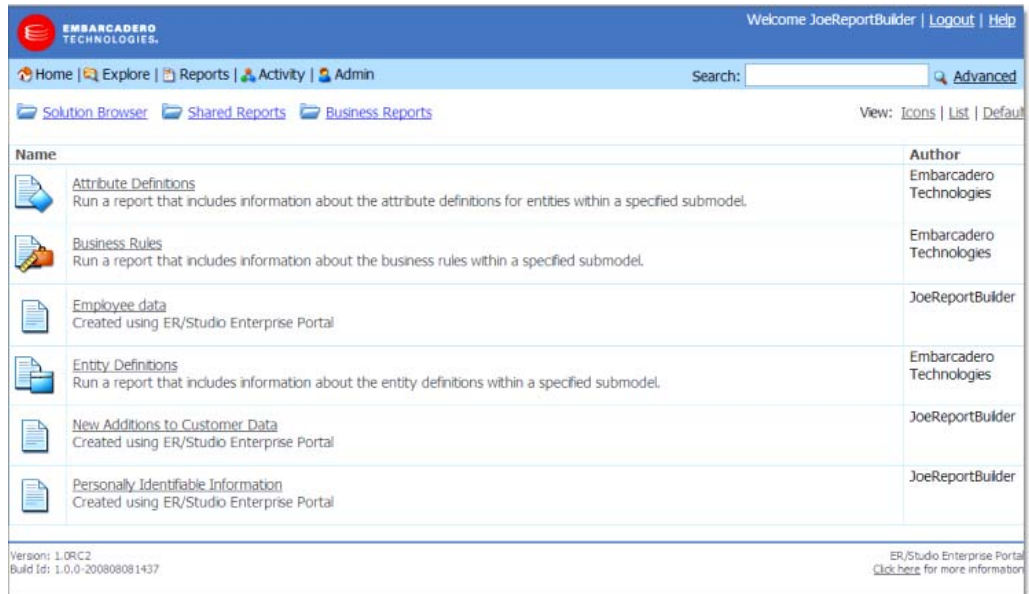

Figure 4 - ER/Studio Enterprise Portal Shared Reports

Export to Familiar Business Data Formats

Once users have created a shared standard report or an ad hoc report, they can save those results in various formats. This allows users to work with model information in the office productivity tools they are most familiar with. See *Figure 5 – Report Exported to Microsoft Excel* for an example of an attribute report exported to Microsoft Excel.

This feature allows them to incorporate model information into other documents and presentations. Imagine business users displaying information from data models as they make presentations to executives or train other users in new business concepts, without having to wait for an IT staff member to get that information for them. User engagement of this sort is a great way to ensure that users will collaborate on future modeling efforts.

Not only can users save reports in a familiar format such as PDF, HTML, or Microsoft Excel; *search results* can also be saved as a comma delimited file.viewed in Microsoft Excel or Adobe PDF format.
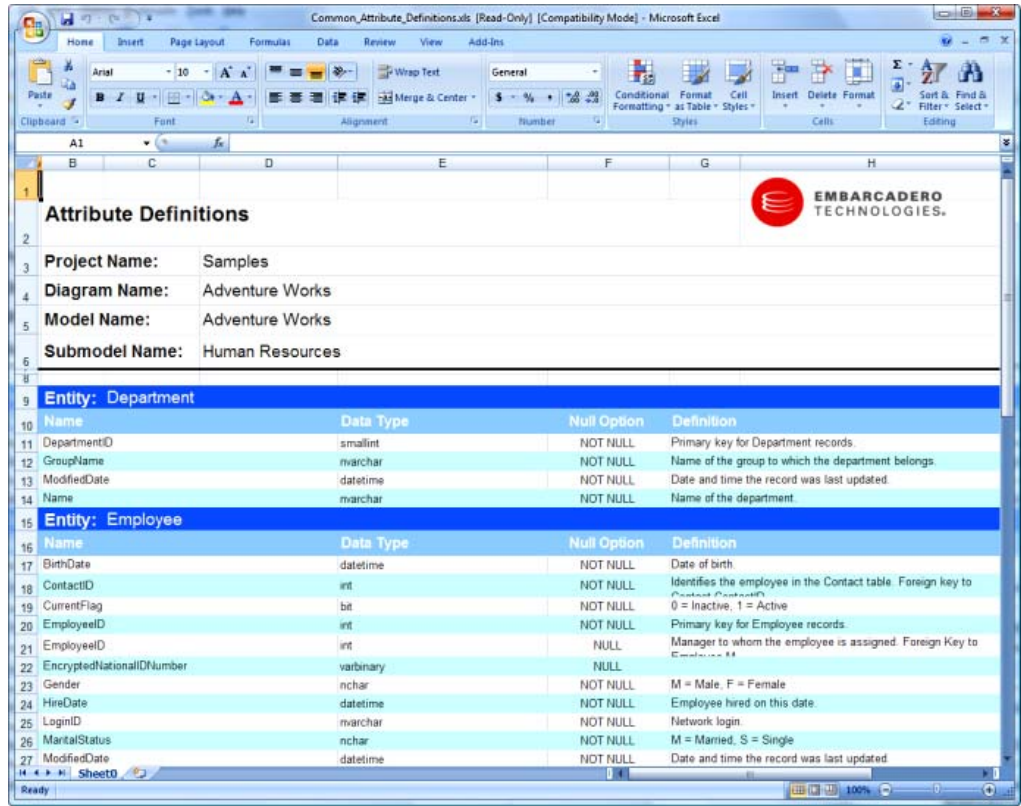

Figure 5 – Report Exported to Microsoft Excel

5   **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 the ER/Studio Enterprise Portal 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 Enterprise Portal Advanced Search

Not only can business users explore models, they can also search across models in the Repository. They can perform a simple search via the upper right hand corner of their browser as well as perform an advanced search based on almost any type of object. As can be seen in *Figure 6 - ER/Studio Enterprise Portal Advanced Search Options,* searches can be inclusive or exclusive. The user also has options for ordering results and including or excluding types of objects.

Figure 6 - ER/Studio Enterprise Portal Advanced Search Options

Since the Portal is a browser-based application, users can even add the quick search capability to their browser search bar [ii] – making the data within the repository as easy to access as any other data they search for on a regular basis.

ER/Studio Enterprise Portal 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. 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, as shown in *Figure 7 - ER/Studio Enterprise Portal Ad Hoc Reporting Options.*

Figure 7 - ER/Studio Enterprise Portal Ad Hoc Reporting Options

Ad hoc reports can also be saved and shared for others' use. Reports can be rerun at any time from the Portal home page as seen in *Figure 1 - ER/Studio Enterprise Portal*, under My Recent Reports. Refer to *Figure 4 - ER/Studio Enterprise Portal Shared Reports* for samples of custom reports created by user *Joe ReportBuilder*.

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.

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.

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 executives will have more confidence in the results of the modeling process.

About the Authors

Karen López is Principal Consultant of InfoAdvisors. She has more than twenty years of experience in helping organizations implement large, multi-project programs. In her role as an IT project manager she has coached many architects and developers on how to stay focused on the real goals of their projects. She wants you to see your models used, enjoyed, and respected.

She is also the Moderator of InfoAdvisors/ITBoards.com IRM discussion groups, an online community of several thousand data management professionals.

Rob Drysdale is Senior Program Manager at InfoAdvisors. He has extensive business management experience and has participated on several large IT projects as a business user and analyst. He has witnessed a lack of business and IT collaboration on some of his past projects and, not surprisingly, how this disconnect contributed to overall problems with the projects. This was especially frustrating for Rob as Karen had taught him the value of collaboration and modeling. He hopes that this paper will inspire you to improve your team's ability to meet business goals.

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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ii

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