



WHITE PAPER: SELF-SERVICE BUSINESS INTELLIGENCE

Cautions and Considerations

Background

Being a data-focused company, Metamor Systems strongly believes in empowering everyone to use data in their day-to-day jobs. Of course, this is nothing new. The approach of “self-service business intelligence” (or self-service BI) has been around for a long time. In the 1990’s we were creating many, many standard reports based on any variation that users could think of. By the early 2000’s, we were making the data accessible through web-based online analytical processing (OLAP) tools. These put some amazing power into the hands of business users.

As an example, we replaced hundreds of “standard reports” with one OLAP “cube” (a data set that can be “sliced and diced” using the on-line tool). Not only did this replace an overwhelming number of reports (think of a huge list of reports with rows and columns of data...all of them not integrated with the others), it enabled users to explore the data themselves using the various parameters and measures presented in the “cube”. Additionally, users could “drill-down” into the areas where they saw interesting results to get more details. The result is that hundreds of thousands of combinations could be easily created by users...with just a few mouse clicks. Metamor Systems saw first-hand how this empowered business users to unlock the power of the data to find previously undiscovered insights.

Fast forward several years, there are many ways to access data quickly and easily. In addition to OLAP tools (e.g., SQL Server Analysis Services), there are other tools such as Power BI, Tableau, Qlik Sense, machine learning available as cloud services, AI, Apache Spark, and other tools. Each of these has the potential to unlock insights that lead to company innovation (e.g., a new customer segment, a change to a product, etc...). In fact, self-service BI is considered one of the items that many say are “essential” to business:

<https://www.forbes.com/sites/louiscolombus/2020/05/03/62-of-businesses-say-self-service-bi-is-essential-in-2020/?sh=2123ab83f9a4>

However, these equally have the potential to undermine the confidence of company data and the ability for business users to find those insights. All too often, poor data quality or a challenging data set can “turn users off” to the tools that they might otherwise embrace. This paper is designed to highlight some of the “do’s and don’ts of implementing robust data tools for business users.

Focus on the Data

While some data analysts will be used to combing through many gigabytes (or terabytes) of data, many users can become overwhelmed quickly with all the options available. Additionally, many new users won’t know the nuances of the source data sets (e.g., X field needs to be a character field to preserve the leading zeros that are significant to the data). Therefore, the first and most important piece of enabling users to explore their own data is to make sure that it’s already cleaned and processed for use in reports

<https://searchbusinessanalytics.techtarget.com/tip/5-self-service-BI-best-practices-for-larger-organizations>). Additionally, it is usually necessary to implement some derived or calculated columns to encapsulate complex business rules that users would otherwise need to use repeatedly. Finally, the initial implementation should limit the data set. Again, new users could get overwhelmed with many, many fields to choose. Therefore, creating a cleaned and pre-calculated data set to explore will often create more value initially because users will find new ways of viewing the data that they technology staff don't know about. Once a more limited data set(s) are in-use and there are some "wins" (i.e., users created some analyses or reports that have business value), then other data sets or expanded data sets can be introduced.

Examples in Training

Another key item to include when rolling out self-service BI is to make it relevant to users. That is, use true and concrete examples within the training. Oftentimes, new users will get "hung up" on the data that is presented and focus on "that's not a correct number" rather than the technology concept. Therefore, using common and familiar examples with known results (that users will know as correct) will enable them to see past the individual numbers and focus on learning the tool. It will also increase confidence in the tool by showing that "correct" results can be created rather than just using made up examples (leaving users with questioning if it will work for their particular area). While this may seem like either an obvious or minor point, it can literally derail a training session if a power user starts to question the data results (and therefore, question the entire tool and underlying data). Therefore, it's "better safe than sorry".

Hands-On Exercises

Related to real data used in the training, another key is to get users to really use the tool in training. So having hands-on exercises is another critical piece. All employees have a lot to do and to try to find the time to dive deep into a new tool is a challenge. Additionally, some employees are just not that self-motivated to create the time and space to really learn something new. Therefore, training sessions are needed and NOT for lectures. Yes, some information needs to be shared on how to use a new tool. However, employees are smart people and generally can figure things out for themselves. So the majority of time training must be for allowing employees to use and explore the tools. By doing this, they will find a few techniques that they'll use day-in-and-day-out. This, after all, is the point. The purpose of training (at least initially) isn't to make employees experts in the new tool; but rather, to get them comfortable enough with the new tool that they will see value in and use it.

When creating hands-on exercises, a key component of those is to create something that is replicable. Showing an employee a new technique once that is incredibly complex won't have the desired effect. The employee will come away thinking that the tool is overly complex and doesn't have the value that they need. By creating exercises that can be applied to a variety of situations or are common across the company can instill the usefulness as well as the proficiency that the user will take back to his/her/their desk and use. Once that users have the

basics down, they'll take small amounts of time to explore other features and create more complex analyses.

Collaboration and Discussion

Once training sessions are held and users go back to their desks, then the real challenge happens. Invariably, some users will try to do something fairly complex and run into a challenge: either the data set is not set up to accommodate the analyses or the way to get the tool to perform the analyses is not intuitive enough for users to pick it up initially. This could be the death of a self-service tool. If users don't see the value of the tool or don't give it the time and energy needed to create the value, the tool may get the label of "useless" or "too difficult". To alleviate this, technology staff skilled in using the tool need to be readily available. Oftentimes, a couple minutes working with the users will end up with the users thinking "Oh, that's pretty simple...I didn't know how to do that". By actively helping users overcome their initial challenges, they will "give the benefit of the doubt" in the future and keep using the tool. This can create long-term users rather than naysayers. Additionally, by creating a forum for different users to share their successes and challenges, details of how to use the tool can be shared. This is ultimately what is needed: creating a community of staff to help each other. Rather than "throwing their hands up" and deeming the tool "useless", others can help out and share their skills and knowledge. This enables a "rising tide raises all boats" approach where everyone then is more able to use the tool. By doing this, it solidifies the tool in the organization as something useful. That is the ultimate goal of implementation, of course.

For more details about how Metamor Systems can help implement a successful self-service BI tool, please contact us here: info@metamorsys.com
