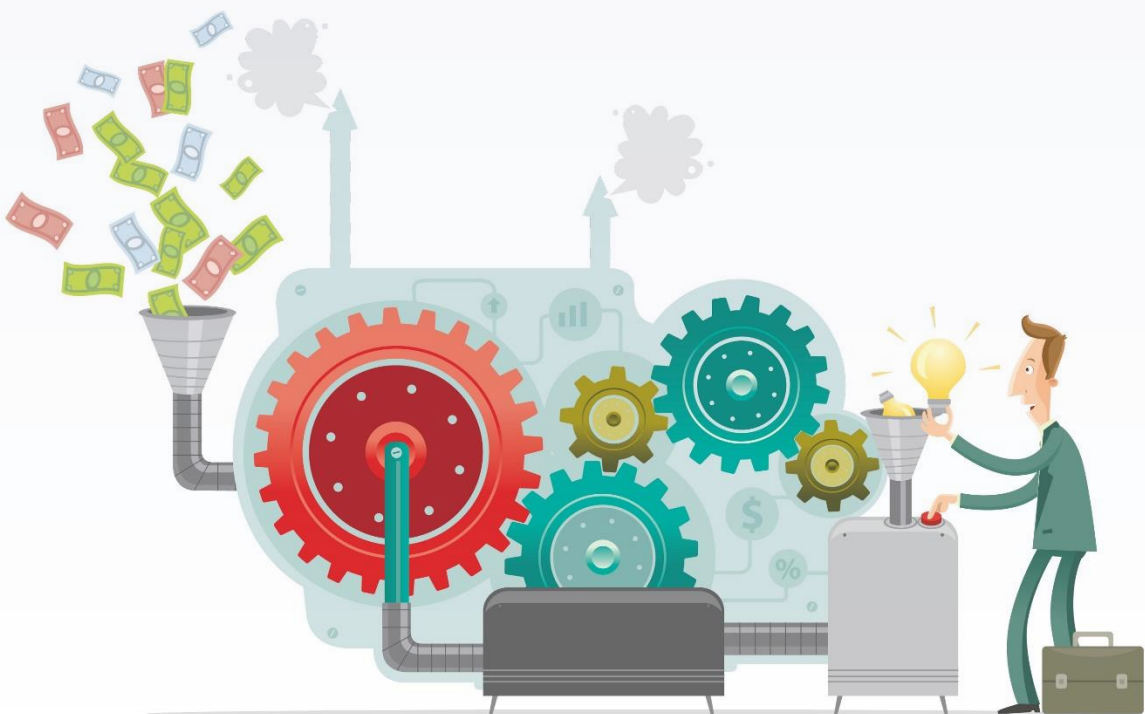# IQAccountant Financial Data and Analytics Primer

Microsoft Partner

ABSTRACT

IQAccountant REACTR (Resource Activity Tracker) Platform is designed for financial metric analytics and automated reporting. So, how do we propose implementing financial metrics for our clients? This whitepaper will walk thru the high-level process that we went thru to develop the cash flow metric as an example of what it takes to create other financial metrics in ERP. This is intended for a topical discussion. Please get in touch with IQAccountant for a detailed and specific discussion of each unique customer scenario.

WHITE PAPER

On-demand intelligent data analytics are limited in ERP by database design. We developed the Cashflow REACTR (Resource Activity Tracker) platform to bridge the gap between the transactional ERP application and on-demand integrated data analytics and automated reporting. A good question would be what type of data analytics are we proposing in REACTR? There are three main types of data analytics that are categorized as the following: descriptive and diagnostic, predictive, and prescriptive. Although there is much discussion and fanfare around the last two which involve machine learning and artificial intelligence, descriptive analytics is the feasible first step to build upon a data-literate and data-driven culture in your organization. Why is that so? It is due to the accessibility of the data from the point of truth ERP system which contains structured data. Also, the process to implement descriptive analytics is quicker, consistent, and predictable which creates an easier narrative for new users to grasp. In this whitepaper, we will focus on descriptive analytics for ERP and how we can implement on-demand integrated financial metrics and overcome the database design of ERP using the example of how we implemented Cash flow metrics.

EVERYTHING STARTS WITH A GOOD QUESTION

IQAccountant began by asking a simple question: "Can we make cash flow metrics more accessible and valuable to management?" This began our journey to develop the Cashflow REACTR Platform which underlies the financial metric engineering and delivery of not only cash flow metrics.
One of the first requirements is to have a good question to answer: for instance, "What business question are we trying to answer?" In descriptive and diagnostic analytics, the question is more akin to "What has happened?"

Our experience in working with ERP clients is that they are interested in the question "What has happened to our cash flow?" but cash flow has always been a source of pain for on-demand reporting because of the number of data silos. Generally, clients have implemented opaque and manual processes to support cash flow reporting after the period end. Once we agreed that this was a worthy question to answer we began our process to build out the financial metric using the REACTR platform.

Do you have an idea what other questions your company might want to answer using descriptive and diagnostic analytics? That is the first step on your data and analytics journey.

DATA CAPTURE STAGE

The first stage of financial metric implementation is to figure out all the potential data points that are required to paint a complete picture. For the cash flow metric, we came up with the following conclusion: cash activity can come from a number of sources that are not only internal to the ERP but also external to the ERP like third-party treasury systems or revenue reporting applications. Having understood this basic requirement, we developed a GL integration process for clients so that we could collect any third-party data that was not available in the ERP. However, we could just as easily integrate into the third-party systems and collect their information as well.

Internally within the ERP, we identified all the potential modules that can collect cash activity which include the following: Billing, Customer Contracts, Accounts Payable, Accounts Receivable, Travel and Expense, and General Ledger. Once we have a complete understanding of the data capture of the ERP, we were ready for the next stage in the development of the financial metric.

DATA PROFILING STAGE

The data profiling stage is the effort to understand the data silos and the external data that comprise the financial metric data well. It is an ongoing process as the system configuration and application upgrades and other factors change the landscape of the data fields, tables, hierarchy among tables, business logic that maintains the tables, and finally the overall process of reporting the activity in the ERP transaction layer level. We understood each module and external data source before completing our models in the data engineering stage that we will discuss next. A good example of this effort is the process of recording an AR item: throughout the item lifecycle, it contains three levels of tracking: item, activity, and distribution. Without a working knowledge of the fields, table hierarchy, and business processes, it would be difficult to engineer the cash flow metrics, as an example.

DATA ENGINEERING STAGE

Data engineering required us to use the knowledge we attained from the data profiling stage and begin building out the delivery process. Here are a few of the steps required in this stage:
- REACTR process contains the model for data capture.
    - Removing duplicates
    - Populating missing values
    - Purging undesired values
- Configure the analytics using hierarchy levels and nodes.
- Create enriched data analytics using operational and financial data.
- Ensure database performance.

DATA QUALITY STAGE

The data quality stage is a continuous activity that is informed by the data profiling and data engineering stage depending on what has changed upstream. When we tested our cash flow metric data, we found some nuances with the sub-ledger structures that required more data profiling of the table hierarchy which caused some data engineering changes. We returned to the data quality stage after each engineering change to regression test and ensure the data capture was correct. A rigorous and continuous process.

DATA VISUALIZATION, DASHBOARDS and REPORTS

Using the Microsoft Power BI Service, the work from the prior steps can really explode into something quite useful with the dashboards and visualizations that are provided on an enterprise-level tool like Power BI. Although building visuals seem easy, we have found that having a well-structured data model can be the difference between mediocre and great. Here are some issues to consider before beginning to develop your visuals, dashboards, and reports:

- Financial statement reports don't have to be developed from general ledger data.
- Time series intelligence simplifies switching between monthly, quarterly, and annual periods.
- Good hierarchical data organization is crucial for a successful BI solution.
- Addressing data problems before they reach the BI platform is an effective solution.
- Live data connections may not meet expectations.
- Data-siloed reporting wastes time and money.

DATA LITERACY ROADMAP

Using the online data analytics feature of the REACTR platform can provide a stepping stone to more data literacy in your organization using descriptive and diagnostic analytics. The advantages of using analytics are the following:

- Consistent
- Predictable
- Reduced Cost
- Quicker Compared to Prescriptive or Predictive Analytics

By introducing analytics to the user base, the company can benefit from information on how well the data analytics is received and what gaps there are for more training and improvement. Eventually, the next steps can be taken toward perspective or predictive analytics.

DATA TRANSFORMATION ROADMAP

Data transformation is a journey, especially for ERP and other third-party transaction systems. By focusing on feasible steps that can be taken like implementing the Cashflow REACTR platform, organizations can move toward more data-driven decisions and nurture a culture of data literacy in the whole organization. Please reach out to us for a discussion about how we can help your organization.

About Cashflow REACTR Platform

The REsource ACtivity TRacker Platform (REACTR) uses in-depth knowledge of financial business processes and database design to establish on-demand data analytics and automated reporting for ERP systems that integrate operational activity into financial amounts. By incorporating operational accounting data models into our REACTR platform, we have constructed a framework that provides data intelligence on the Microsoft cloud ecosystem for management accounting decision support. Our platform offers the quickest path to data transformation and more optimized reporting solutions. IQAccountant is Microsoft Partner. To learn more, visit IQAccountant.com.