**Data Analysis**

I handled the regular collection and reporting of key business metrics to senior management. In my last project, these business metrics were known as "decks". These “decks” or reports are generally produced monthly and are modified from time to time depending on the data needs of the customer

### Regular Reports

|  |  |  |
| --- | --- | --- |
| Deck | Description | Timing/Format |
| BRC Flash | Weekly key indicator metrics, barometer for monthly performance | Sent weekly to global list of Business Information Services team and Business Partners by email |
| BOB Deck | Key performance metrics for previous month (traffic and applications) | Sent monthly to Line of Business in Excel or PDF format by email and stored to a share drive |

### Ad-Hoc Data Requests

Data needs often fall outside the scope of normal reporting. For example, a Product manager may want to look at attrition over a certain period of time. The Data Analysis group would use their expertise to identify where the data components reside and how to retrieve and present the data in a way that answers the original question or questions.

To fill these requests, a Product Manager would need to complete a special data request using the online Business Data Analytics Request Manager (BDARM).

**Data Mining**

The practice of examining large databases in order to generate new information.

* **Data Mining assists in Data Analysis**
* **Data Mining comes before Data Analysis**

Let me give you an example:

Say, you have a sales database. Your sales managers are asking you to give you answers to following questions:

1. Which is our best selling product?
2. Which is our most profitable product?
3. Who is our best salesman?
4. Rank all the salesmen in decreasing order of contribution to bottom-line
5. Which region is our strongest region (Western USA, Eastern USA, MidWest, SouthEast, Northwest, etc.)

(The above 5 pieces of information is achieved by doing data analysis. The above 5 is data analysis)

However, to get to this information, a Data Analyst like Archana has to first do data mining. Archana has to figure out where the data is. How many databases are going to be involved in answering these questions. Does the data need to be scrubbed/cleansed/moved? Do states have to be merged so that we can give information not just based on states but group states by regions! This is all data mining!

**Data Profiling**

What is Trillium Software?

It is a company!!!!

They make various software modules!

1. TS Discovery: for automated data discovery (Say, a company acquires another company! This acquired company has an underlying data model. Has an underlying database. TS Discovery will help us understand/discover the newly acquired database (what tables are there, what columns are there, what constraints are there in this database) and data profiling: It helps the company in designing, validating and deploying custom business and data quality content rules quickly

and easily. Data Profiling tool like TS Discovery also does data quality work!

1. TS Quality: for parsing, standardizing and cleansing global data (If in one db, you are storing your customers’ phone number as ddd-ddd-dddd and in other place, you are storing it as: (ddd) ddddddd! This is inconsistent. You can use TS Quality to cleanse data!

Data Profiling leads to Data Quality!

The amazing thing about Trillium software is that even business people can use Trillium to do data profiling (you don’t have to be technical to do data profiling).

TS Discovery (data profiling tool) and TS Quality (the data quality tool) are tied to each other. When data profiling tool figures out a problem with underlying data (like a PK FK relationship that is not kept/honored), TS Discovery can be used to initiate data cleansing using TS Quality!

**BASEL II/III Concepts**

**Risk-weighted asset**

Risk Weighted asset ( also referred to as RWA) is a bank's [assets](https://en.wikipedia.org/wiki/Asset) or [off-balance-sheet](https://en.wikipedia.org/wiki/Off-balance-sheet) exposures, weighted according to [risk](https://en.wikipedia.org/wiki/Risk). This sort of asset calculation is used in determining the capital requirement or [Capital Adequacy Ratio](https://en.wikipedia.org/wiki/Capital_Adequacy_Ratio) (CAR) for a financial institution.

In the [Basel I](https://en.wikipedia.org/wiki/Basel_I) accord published by the [Basel Committee on Banking Supervision](https://en.wikipedia.org/wiki/Basel_Committee_on_Banking_Supervision), the Committee explains why using a risk-weight approach is the preferred methodology which banks should adopt for capital calculation.

* it provides an easier approach to compare banks across different geographies
* off-balance-sheet exposures can be easily included in capital adequacy calculations
* banks are not deterred from carrying low risk liquid assets in their books

**Foreign Exchange and Derivatives**

* Developed detailed business requirements for implementing trading and trade processing systems (STP), for Capital Markets products, Derivatives, Options, Structured Products, Swaptions, Foreign Exchange Swaps, Interest Rate Swaps, and Fixed Income.
* Developed business requirements for current trade management process covering Foreign Exchange, Structured Products, Interest Rate Swaps, Derivatives, Options, and Swaptions.
* Documented trade lifecycle for all instruments: Fixed Income, Treasury Bonds, OTC Derivatives, Money Market Instruments, all Foreign Exchange products and Asset-backed Securities
* Reviewed with clients and business staff strategies for accounting of derivatives and the impact of FAS133
* Managed a group of analysts, developers and testers, including overseas developers in Bangalore to handle dayto-day maintenance issues for all applications as well as many system enhancements for all types of products including equities, futures, options, fixed income instruments, forex, structured products, money market contracts, and loans,
* Addressed issues both in maintenance and ongoing development in general securities and banking functions such as orders and trade execution, forex, risk management, corporate actions, accounting, settlement and reconciliations. Organized the requirements and development to implement the (2005) European Union tax on earned interest for PWM sites conducting banking and securities business in Europe.
* Major projects included straight through processing, trading and settlement of bonds issued in emerging markets, forex trading and credit risk on forwards, and on-line calculations of client risk exposure to the bank.
* Excellent understanding and work experience over different Equities, Equity derivatives and Fixed Income instruments: Bonds, Cds, Repos, CMOs, CLNs, MBS, ABS; OTC derivatives: Forwards, Futures, Options, Swaps investments.
* Excellent understanding of US GAAP, Custody accounting and reporting, SOX and BASEL II, Compliance, Reg T, Corporate Actions and Risk analysis with solid experience in Business Process Modeling, Requirement gathering and Analysis in for financial products such as Equities, Fixed Income Instruments, Credit Risk Analytics, and Derivatives.
* Conceptual understanding of Financial Risk models, Risk management, Trading life cycle including knowledge for Equities, derivatives trading, fixed income instruments, structured products, and risk models.
* Designed the algorithm and currency trading screen for the Bourse Forex trading simulator (client Citi)
* Comprehensive knowledge of all financial products including fixed income, foreign exchange (FX), equities, derivatives, commodities, securitized products, structured products, mutual funds, and alternative investments.
* Designed the Interface and Order Flow to NasdaqOMS and SelectNet for OTC Derivatives messages
* utilizing 4.4 (ISDA) version of  FpML.
* Familiar with investment instruments like Stocks, Bonds, money market, Derivative Markets, hedge funds, mutual funds, Equity Derivatives, forex, and Mortgage backed Securities (MBS).
* Business requirements and assessment of current OTC derivatives instruction trade management processes, reference data, data attributes and security master database. Asset classes covered include Interest Rate Derivatives, OPUS derivatives pricing, Equity Swaps, and Interest Rate Swaps, Credit Default Swaps, Foreign Exchange Swaps, and Equity options, Swaptions, Foreign Exchange Options and Equity/Index Derivatives.