DNA Overview

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This document offers a bird’s eye view of the DNA project for new users, customers, technical and non-technical employees, or anyone who is authorized to receive knowledge about the project.

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# Context

Every business in the world involves delivering a product or a service or something else of tangible monetary value in exchange for a price. The entity that delivers this product/service is termed as the company and the recipient of the said product/service is the customer.

Naturally then, businesses run on financial activities that generate revenue – and are built with the intention of gathering profits for the company that is running the business. As such, every business must optimize itself to ensure that costs are kept to a minimum, while upholding the promised quality of products and services offered by the company running that business.

With the 21st century and the dawn of the post-modern information age, data driven decisions that enable businesses to make strong decisions backed by analyzed data are important for financial success of any company. This means that managers and executives must keep track of the inflow as well as outflow of company finances. It’s their job to weed out unnecessary expenditure and save costs for the company.

To do that, they need data on their hands. Data that has been collected, analyzed, and presented in a visually understandable format, that empowers the stakeholders to make positive decisions. Businesses have historically used data to gather useful information and draw relevant insights from this data to make decisions that would help the business grow.

Over time, this data gathering process has become more and more digitized with large swathes of data in digital form arriving in the business’ infrastructure to be processed. Businesses draw insights from this data through various data management processes.

# DNA

DNA – [] is the proprietary CUSTOMER platform that offers useful business insights and business intelligence to CUSTOMER through processing of copious amounts of data that is generated through their day-to-day supply chain operations. CUSTOMER has a large network of manufacturing, transportation, warehouses, wholesalers, retailers (some owned, some vendor operated) and returns processing units. All these processes generate data that can be processed and from which insights can be drawn to make informed and data-driven decisions.

In essence, DNA is an advanced analytics and BI tool specifically designed for analyzing expenditure, sourcing, and procurement data.

DNA generated insights are delivered to CUSTOMER through an online portal, where users can see useful data based upon their role and access level. These insights are populated on various dashboards that serve various purposes. E.g. supplier central shows all the expenditures CUSTOMER has done after the suppliers.

# Purpose Fulfilled by DNA

DNA enables the CUSTOMER to easily identify and analyze trends, recognize patterns, identify opportunities for improvement, and make data-driven decisions for a more efficient procurement process.

# Typical Users of DNA

The following people would be mostly using DNA:

1. Chief Procurement Officers
2. Procurement Managers
3. Procurement Analysts
4. Finance Department and Subsidiaries
5. Supply Chain Managers
6. Sourcing Officers
7. Strategic Sourcing Officers
8. Operations Managers
9. Consultants and Advisors (authorized by CUSTOMER)
10. Business Development Teams
11. Category Managers
12. C-Suite Executives

# Customer Pain Points Addressed by DNA

DNA addresses the following problems:

1. Cost Reduction
2. Corporate Responsibility
3. Risk Management
4. Sourcing Opportunity Identification
5. Cash Flow Improvement
6. Business Opportunities

# Key Features and Benefits

* Category Management
* Strategic Sourcing
* Contract Management
* Analytics in Source-to-Pay (S2P) Process
* Analytics in Sustainability and Corporate Social Responsibility Spending
* Risk Management
* Analytics in Performance Management
* Cash Flow Improvement
* Market Benchmarking
* Savings Lifecycle Analysis
* Analysis of Data from External Sources
  + Invoice Analytics
  + Purchase Order Analytics
  + Payment Term Analytics
* Supplier Analytics
  + Diversity Analytics
  + Supplier Risk
  + Sustainability
  + Supplier Consolidation
* CO2 Analytics [involves analysis of the carbon footprint through Scope 1, Scope 2, and Scope 3 emissions]

## Expense Forecasting

DNA enables the CUSTOMER to forecast their upcoming spending on the following fronts:

* Tail Spend
* Maverick Spend
* Direct Spend
* Indirect Spend
* Capital Spend
* Operating Spend
* Strategic Spend

# Dashboards in DNA

A dashboard is simply a visual representation of data insights in a manner that is understandable by the user. In DNA, there are dozens of dashboards each representing a different aspect of the larger operations of the CUSTOMER. Each of these dashboards is a combination of charts, graphs, tables, KPIs, and other sources of insights.

All dashboards are designed to ensure that they are interactive in nature and easy to understand. In DNA, the following characteristics are found for each dashboard:

1. Aggregated and visualized data  
   The same dashboard can utilize data from various tables and views created from various tables, sometimes with no seemingly direct connection between tables.
2. Interactive  
   Dashboards in DNA are meant to be interactive. These interactions come in the form of filters and visual changes that users can make to suit their use better.
3. Customizability  
   Admins can customize the roles and access to users. Also, users have the option to build their own dashboard (based upon their level of access) tailored to their unique needs.
4. Metric Tracking  
   In DNA, dashboards also offer tracking of various business metrics whose purpose is to enable users to identify trends, patterns, anomalies, etc.
5. Reporting  
   All dashboards in DNA do and must have the reporting feature that allows users to filter and export the business data or part thereof in the form of report.

**Technology used for dashboards:** Dashboards in DNA are built using PowerBI.

# DNA Database

All data in DNA is stored, processed and analyzed in Snowflake or SQL. For various verticals such as CPFR, Ops Analytics, Spend analytics, the developers have created distinct schemas into which all objects such as functions, procedures, tables, views, etc. are stored and defined.

# DNA Front End

Front end pages in DNA are built using PHP for all client side and server-side scripting. PHP pages make up the front end of the DNA portal – the interface that lets users on the CUSTOMER side to view reports, live-data on dashboards, visual representations of the analyzed data, etc.

# DNA APIs

DNA uses APIs developed in-house for all transactions that happen through the system. These APIs facilitate transfer and translation of data between PHP and SQL/Snowflake systems, along with dashboards that built using PowerBI or Tableau.

# Hosting

DNA uses Azure Cloud services to host the platform.